

# FOR 2<sup>nd</sup> CYCLE OF ACCREDITATION

# MATOSHRI COLLEGE OF ENGINEERING AND RESEARCH CENTRE

EKLAHARE, NEAR ODHAGAON, OPP. AURANGABAD HIGHWAY, TAL./DIST.

NASHIK

422105

engg.matoshri.edu.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

August 2021

### 1. EXECUTIVE SUMMARY

### 1.1 INTRODUCTION

Matoshri College of Engineering and Research Centre was established in the year 2008 by Matoshri Education Society, Yeola, constituted by the renowned philanthropists in the region to provide quality technical education to mostly the rural and urban students with socio-economical causes. The institution is approved by the All India Council for Technical Education (AICTE) New Delhi, recognized by the Directorate of Technical Education Maharashtra, and is affiliated with Savitribai Phule Pune University. The Institute has acquired 2(f)/12(b) recognition from UGC. In and around the district the institute is recognized by strong and multifaceted leadership, comprehensive and rigorous practices, uncompromising academics, competent faculty, and stern discipline.

The College is located in a more than 7.5-acre campus that is fresh, lush green with a naturally beautiful site. The College has located approximately 14 kilometers from City Nashik and 1 km from Nashik-Aurangabad Highway at Eklahare, Maharashtra. The campus has been planned to take into consideration the ever-increasing demand for space. The college building is ever-expanding and has approximately 2 lakh sq. ft. of built-up area to its credit to house the smart lecture halls, interactive labs, rich library, and spacious workshops. All these facilities are well stocked with furniture equipment, computers, books, machinery, and tools.

The Institute has started in the year 2008 with an intake of 180, comprised of 3 UG programs, Computer Engineering, Information Technology and Electronics, and Telecommunication Engineering, grown up as a leading learning center with an intake of 654, comprised of 7 UG programs, 5 PG programs, and 3 Research Centers. Out of 7 UG programs, 6 programs Computer Engineering, Information Technology, Electronics & Telecommunication, Civil Engineering, Electrical Engineering, and Mechanical Engineering are permanently affiliated to Savitribai Phule Pune University (SPPU), Pune.

Besides the academics students and staff are always actively engaged in participating and organizing cocurricular and extra-curricular activities. Participation in various events and symposia is highly encouraged and students respond with a large number.

#### Vision

To Establish Omnipotent Learning Centre Meeting the Standards to Evolve as a Lighthouse for the Society.

#### Mission

- Setting up state-of-the-art infrastructure.
- Instilling strong ethical practices and values.
- Empowering through quality technical education.
- Tuning the faculty to modern technology and strong liaison with industry.
- Developing the institute as prominent center for Research and Development.
- Establishing the institute to serve a Lighthouse for the society.

Page 2/107 08-01-2022 10:11:54

### 1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

### **Institutional Strength**

Institute strictly adheres to the uncompromising attitude toward the academic conduction. The strict discipline emphasizing optimal contact hours' utilization is one of the fortes of the Institute. The academic performance of the Final Year student is consistently outstanding over the years owing to the fact that comparatively low merit students have been admitted to the Institute. Following are the glimpses of the strengths of the Institute,

- Multifaceted and potent leadership
- Teaching-learning practices with efficacy are used during the class room sessions and laboratory sessions.
- During the unprecedented scenario of pandemic the faculty has quickly adapted themselves to online teaching-learning mode under the unparalleled mentorship of the Institute head.
- Institute has created its own knowledge base for the learners where multimedia learning resources are readily available to the learners.
- Almost all faculty and many students have acquired the quality MOOC certifications like NPTEL and Coursera.
- The faculty members are blend of the teachers with diverse experience and expertise.
- Institute motivates the staff for qualification improvement and skill development.
- Modern Essential infrastructure, State-of-art Laboratories, ICT enabled classrooms, huge Amphitheater, Spacious Auditorium and Green Gymnasium are available at the Institute.
- Central library has rich set of books with e-resources and reference materials.
- Vibrant NSS unit conducts various social and extension activities.
- The institute pays special attention in conducting appropriate co-curricular and extra-curricular activities.
- Growing number of placements especially for soft branches.

#### **Institutional Weakness**

Institute strives hard heading towards the vision. Despite of the homogeneous and directed efforts there are certain areas where the Institute has to improve. Some of the identified weaknesses are,

- Since the institute does not have autonomy, the flexibility in academics is limited.
- The institute is lagging in the consultancy work.
- The cadre ratio of the faculty is not maintained.
- Funded research projects have not been undertaken in the assessment span.

### **Institutional Opportunity**

With the prudent leadership of the Institute Head the staff members are motivated and orchestrated to strive hard for satisfying the mission statements. The potentially identified opportunities are,

- With the learner centric approach and efforts the Institute can create number of Entrepreneurs and focused individuals.
- As UGC 2(f)/12(b) recognition has been acquired, there is a scope to go a step ahead to become

Page 3/107 08-01-2022 10:11:55

autonomous.

- Many faculty are oriented and competent enough to pursue Ph.D.
- Attract agriculture based industries for collaboration.
- To become the learning Centre of Excellence in the region for the distinguished stakeholder based policies.

### **Institutional Challenge**

- Attract the meritorious students in and around the area.
- Despite of the continuous efforts the increase in the number of alumni turning to entrepreneurship has not been observed.
- To increase the number of placements with higher packages, especially for the hard branches.
- Collaborations with Industries and Research Institutes.

### 1.3 CRITERIA WISE SUMMARY

### **Curricular Aspects**

Despite of rural location, the institute has prospered by leaps and bounds within a span of thirteen years to compete the urban colleges in the city. As the Institute is affiliated to State University it has to abide by the rules, regulations and curricula of the University. The institute organizes and promotes the learners with respect to co-curricular and extra-curricular activities. The elective subjects add to the learner's choice to learn specific courses during their study. Many skill development and value added programs are organized for all round development of the learners. Planning and execution are closely followed in the conduction of academics, co-curricular and extra-curricular activities. Feedbacks from learners and other stakeholders help the Institute to refine and reiterate the processes and practices to reach to the goal.

### **Teaching-learning and Evaluation**

Institute is recognized as one of the renowned learning centre and strong academics and discipline. The institute is successful in attracting experienced and expert human resource. Faculty is responsible for learning and execution of teaching learning processes with proper feedbacks. Teaching learning process is furnished with following constituents:

- Scheduled Preparation and Course planning up to lesson level.
- Teaching methodology
- Performance Evaluation with regular feedback and remedial actions if any.

The centralized admission process at the Institute is followed as per the guidelines received from the apex bodies and affiliated university. The students are nurtured during their stay at the college with personal attention. Mentoring is rigorously followed in the Institute and students open up and provide the constructive feedbacks during one-to-one conversations with the mentor. Every department has their Vision, Mission, Pos, PSOs and COs clearly defined and pay special attention to the diversity of the learners. Teachers are well prepared, well equipped and conversant with the using of different pedagogical means for effective teaching-learning. The Institute has well defined mapping mechanism to verify the targeted learning outcomes.

### Research, Innovations and Extension

Currently, the Institute has three research centers viz. Computer Engineering, Electronics and Telecommunication Engineering and Mechanical Engineering, where active research activities are going on. Many experts and competent Ph.D. guides are associated with these research centers. Principal and Dean Academics promote and encourage research and allied activities. Rich library resources are available for the reference of research perusing faculty. There are a few collaborations with the Professional Institutes in this regard where the motive is an enrichment of the research component. Many workshops and expert talks have been organized to guide the staff regarding research and make them aware of technological trends, modern tools and domains of research. A few extension activities have been conducted for the awareness and knowledge.

#### **Infrastructure and Learning Resources**

The infrastructural facilities are up to the mark in the institute. Classrooms, laboratories, workshop and Seminar Hall are well equipped. ICT facilities are available in the classrooms, laboratories and seminal halls. A Basketball court, Two Volleyball Grounds, Cricket ground, Football Ground, Green Gymnasium, Yoga Hall, Auditorium and Amphitheater are available in the premises. Library has rich physical and e-contents with ample facilities and space. Ambience is maintained for learning in the Library hall and reading room. Institute has high speed internet connectivity and the computing nodes are networked. The IT facilities are upgraded from time to time. Adequate number of Computers and printers are available in the Institute and all the required System software and Application software are available. Modern tools needed for programming, simulation, modeling and testing are available at the departments. The utilization of the physical resources is up to the mark. Maintenance and Calibration of the equipments are carried out when and as required. Internal and external dead stock verification are carried out in each academic year. Spares and consumables are maintained and every department has its own updated central and lab dead stock registers.

### **Student Support and Progression**

The academic is supported by co-curricular and extra circular activities. It helps for the all round development of the learners. Participation for such activities is highly encouraged. NSS Unit is very active at the institute. Student assistance in facilitation of scholarships is the privileged service extended by the Institute. Earn and learn facility has been availed by the needy students from time to time. Training courses and workshops are organized for the development of the students. Student Grievance Cell, Anti-ragging Cell and the other cells are available for sorting the relevant issues. Learners are sensitized with the issues related to Gender Equity. Alumni association is functional in the Institute and the healthy dialogue with the alumni help to improve the practices and processes.

Student council has been constituted every year contributing to organization for sports events and student programs during the year. Students are encouraged for higher education and separate mentoring has been provided for the students seeking government services.

### Governance, Leadership and Management

Page 5/107 08-01-2022 10:11:56

The prudent head of the Institute with the team of Head of Departments take the efforts for the betterment of learners. Human resource is managed with best practices and processes. The active leadership has streamlined the unambiguous processes and practices with reference to Recruitment, Progression, Training, Resource Management, Resource Expansion, Infrastructure Development and expansion, Financial Management and Performance appraisal of the employees. Learners are always at the priority in all the Governances. To inculcate the quality among the staff and students, the faculty is highly encouraged. Ethical practice is followed at all the levels of the Governance.

Institute believes in decentralization and the tasks are delegated and executed by following defined protocols. Financial management, Resource Mobilization and Audits play the role in directed growth of the Institute. Student and Staff welfare schemes are available and the Institute has its own Cooperative Society for loans. ERP is phase wise functional and deployed on the own server of the Institute. Academics are closely observed by the monitoring committee and necessary actions are taken time to time after the periodic reviews.

#### **Institutional Values and Best Practices**

Best Practices add to the enrichment and enhancement of faculty and students. Students participate in societal activities and programs on societal issues. Institute emphasizes gender equity and no bias in this regard is tolerated. Experimentation is one of the peculiar characteristic of the faculty at the institute and they adopt appropriate means and methodologies for effective learning. Green campus has been maintained and all sort of wastages are taken care of.

### 2. PROFILE

### 2.1 BASIC INFORMATION

Name and Address of the College				
Name	MATOSHRI COLLEGE OF ENGINEERING AND RESEARCH CENTRE			
Address	Eklahare, Near Odhagaon, Opp. Aurangabad Highway, Tal./Dist. Nashik			
City	Nashik			
State	Maharashtra			
Pin	422105			
Website	engg.matoshri.edu.in			

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Gajanan Kashiram Kharate	0253-2406611	9604788280	0253-240661 0	matoshricoe.hr@g mail.com
IQAC / CIQA coordinator	Shridhar Shantaram Khule	0253-2406621	9850519948	0253-240660 0	khule_ss@rediffma il.com

Status of the Institution	
Institution Status	Private and Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minroity institution	No

Page 7/107 08-01-2022 10:11:57

# Establishment Details Date of establishment of the college 01-01-2008

University to which the coll college)	University to which the college is affiliated/ or which governs the college (if it is a constituent college)		
State	University name	Document	
Maharashtra	Savitribai Phule Pune University	View Document	

Details of UGC recognition				
<b>Under Section</b>	Date	View Document		
2f of UGC	22-08-2016	<u>View Document</u>		
12B of UGC	22-08-2016	View Document		

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)					
Statutory Regulatory Authority	Recognition/App roval details Inst itution/Departme nt programme	Day,Month and year(dd-mm- yyyy)	Validity in months	Remarks	
AICTE	View Document	25-06-2021	12	Approval letter from AICTE is uploaded	

Details of autonomy	
Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	No

Recognitions	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	No

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Eklahare, Near Odhagaon, Opp. Aurangabad Highway, Tal./Dist. Nashik	Rural	7.5	19809.63

### 2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Pr ogramme/C ourse	Duration in Months	Entry Qualificatio n	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Artificial Intelligence And Data Science	48	HSC	English	60	14
UG	BE,Civil Engineering	48	HSC	English	120	39
UG	BE,Electrical Engineering	48	HSC	English	60	9
UG	BE,Mechani cal Engineering	48	HSC	English	120	8
UG	BE,Electroni cs And Telec ommunicatio ns Engineering	48	HSC	English	60	20
UG	BE,Informati on Technology	48	HSC	English	60	44
UG	BE,Compute r Engineering	48	HSC	English	60	42
PG	ME,Civil Engineering	24	BE	English	24	24
PG	ME,Electrica	24	BE	English	24	10

	Engineering					
PG	ME,Mechani cal Engineering	24	ВЕ	English	24	1
PG	ME,Electron ics And Tele communicati ons Engineering	24	ВЕ	English	24	3
PG	ME,Comput er Engineering	24	ВЕ	English	18	2
Doctoral (Ph.D)	PhD or DPhi l,Electronics And Teleco mmunication s Engineering	36	ME	English	16	4
Doctoral (Ph.D)	PhD or DPhi l,Computer Engineering	36	ME	English	16	2

### Position Details of Faculty & Staff in the College

				Te	aching	Facult	y					
	Profe	Professor			Asso	Associate Professor			Assis	Assistant Professor		
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government		1	1	15		1		28		1		86
Recruited	7	1	0	8	6	2	0	8	40	46	0	86
Yet to Recruit		'		7				20				0
Sanctioned by the Management/Soci ety or Other Authorized Bodies		0						0				27
Recruited	0	0	0	0	0	0	0	0	13	14	0	27
Yet to Recruit				0			1	0		ı	1	0

	Non-Teaching Staff								
	Male	Female	Others	Total					
Sanctioned by the UGC /University State Government				0					
Recruited	0	0	0	0					
Yet to Recruit				0					
Sanctioned by the Management/Society or Other Authorized Bodies				62					
Recruited	55	5	0	60					
Yet to Recruit				2					

	Technical Staff							
	Male	Female	Others	Total				
Sanctioned by the UGC /University State Government				0				
Recruited	0	0	0	0				
Yet to Recruit				0				
Sanctioned by the Management/Society or Other Authorized Bodies				45				
Recruited	18	20	0	38				
Yet to Recruit				7				

### **Qualification Details of the Teaching Staff**

Permanent Teachers										
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD	0	0	0	0	0	0	0	0	0	0
Ph.D.	7	1	0	4	2	0	0	0	0	14
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	2	0	0	53	60	0	115

	Temporary Teachers									
Highest Qualificatio n	Professor		Associ	Associate Professor			<b>Assistant Professor</b>			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers										
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties					
Number of Visiting/Guest Faculty	Male	Female	Others	Total	
engaged with the college?	4	0	0	4	

### Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	1296	1	0	0	1297
	Female	662	0	0	0	662
	Others	0	0	0	0	0
PG	Male	38	1	0	0	39
	Female	18	0	0	0	18
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	2	0	0	0	2
	Female	4	0	0	0	4
	Others	0	0	0	0	0

# Provide the Following Details of Students admitted to the College During the last four Academic Years

Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	88	89	91	90
	Female	47	34	44	42
	Others	0	0	0	0
ST	Male	38	29	54	40
	Female	19	15	11	14
	Others	0	0	0	0
OBC	Male	604	652	695	694
	Female	286	283	276	311
	Others	0	0	0	0
General	Male	350	374	376	418
	Female	211	206	197	215
	Others	0	0	0	0
Others	Male	141	158	193	198
	Female	80	76	83	82
	Others	0	0	0	0
Total		1864	1916	2020	2104

### **Extended Profile**

### 1 Program

### 1.1

### Number of courses offered by the Institution across all programs during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
519	512	512	512	512

File Description	Document
Institutional data prescribed format	<u>View Document</u>

### 1.2

### Number of programs offered year-wise for last five years

2020-21	2019-20	2018-19	2017-18	2016-17
14	13	13	13	13

### 2 Students

### 2.1

### Number of students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
1956	1864	1916	2020	2103

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

#### 2.2

# Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
255	255	255	255	255

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

### 2.3

### Number of outgoing / final year students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
662	647	617	517	742

File Description	Document
Institutional data in prescribed format	View Document

### 3 Teachers

### 3.1

### Number of full time teachers year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
113	116	119	168	163

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

### 3.2

### Number of sanctioned posts year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
129	132	135	178	169

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

### **4 Institution**

### 4.1

### Total number of classrooms and seminar halls

Response: 42

### 4.2

### Total Expenditure excluding salary year-wise during last five years ( INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
612.07	612.07	542.85	556.63	617.85

### 4.3

**Number of Computers** 

Response: 725

### 4. Quality Indicator Framework(QIF)

### **Criterion 1 - Curricular Aspects**

### 1.1 Curricular Planning and Implementation

## 1.1.1 The Institution ensures effective curriculum delivery through a well planned and documented process

### **Response:**

The institute is affiliated to Savitribai Phule Pune University (SPPU). The institute follows the curriculum prescribed by the affiliated University. Annual calendar is published by the University, and based on University calendar; each department of the institute prepares its own departmental academic calendar and activity calendar. Further the summarized institute calendar is prepared. The well defined and documented processes for academic planning, adherence to it, continuous monitoring, examinations, quality assurance, conscious efforts and its impact analysis towards improvement are as follows-I. Planning: The choices of elective courses are collected from the students, course preference for teaching is collected from teachers and accordingly courses are allotted to the teachers. Further, the academic calendar, activity calendar, class timetables and laboratory time tables for the semester are prepared. All the necessary preparations for course teaching, assessment, expert talks, trainings and the field visits are carried out and accordingly are conducted. The course file and Lab manual is prepared / updated by respective course instructor. Faculty prepares teaching plan, laboratory plan, test plan, assignment plan, and pedagogical plan. Laboratory instructor designs and prepares the list of experiments/ lab assignments to be conducted in the semester by considering the COs, university curriculum and curriculum gap, if any; and verify the readiness of laboratory resources for the conduction. II. Execution and Monitoring: The curriculum is well transacted to the students adhering to teaching and lab conduction plan with various pedagogical methods. Effective implementation of curriculum is periodically monitored and reviewed. The department monitors and evaluates the quality of teaching learning periodically through strict adherence to planning, conduction and feedbacks. Observations and Outcomes are communicated to course instructor for their improvement or for encouragement, corrective measures are taken if required. III. Continuous Internal Evaluation: In semester, internal examinations are conducted to assess the students' performance. The efforts are taken to improve the performance of weak students and additional assignments are given to bright students. Continuous assessment of laboratory work is done based on overall performance of student. The parameters used for assessment of assignment are well defined and documented. The continuous assessment of the seminar work and project work is done and recorded in work-book. The assessment parameters are well defined. Students are made aware about the continuous assessment criteria well in advance. IV. Pedagogical initiatives taken by the College: Different pedagogical initiatives are taken by the faculty for improving quality of teaching-learning and laboratory work such as- real world examples, collaborative learning, analogies, demonstrations, field visits, trainings, video resources and presentations. The set of video lectures is prepared by each course instructor and laboratory instructor which are made available for the students at portal named 'Matoshri Knowledge Base' at http://learning.matoshri.edu.in. Course instructors have completed MOOC courses offered by Coursera or NPTEL and FDPs. Course instructors motivate the bright students for the same to improve their depth of understanding. In a few courses, the collaborative learning is conducted and real world examples are discussed by course instructor in a classroom teaching and laboratory sessions.

Page 18/107 08-01-2022 10:12:07

File Description	Document
Upload Additional information	<u>View Document</u>
Link for Additional information	View Document

### 1.1.2 The institution adheres to the academic calendar including for the conduct of CIE

### **Response:**

The guidelines of annual calendar are provided by the university. Based on the guidelines, each department of the institute prepares its own departmental academic calendar Academic Calendar for each semester is prepared by department Program Coordinator (DAC) in the consultation with the HoD before commencement of each semester. Academic calendar includes details of commencement of academics, internal test examinations, Internal, prelim exam, placement guidance sessions, mock practical exam, external PR Exam, External Theory exam and industry visit. The well defined processes for academic planning, and continuous monitoring support conscious efforts to assure adherence to it. Course instructors record the attendance during lectures and lab sessions. Timely and proper delivery of the curriculum is observed by class coordinator and DAC. These records are observed by class coordinator weekly, by head of department monthly and corrective measures are taken, if required. Monthly attendance and academic reviews are prepared by the department and these are observed by Academic Dean and Principal. Periodic monitoring, review and feedback of the delivery and transaction are collected and analyzed further and necessary actions are taken.

The activities of curriculum delivery, planning, implementation, monitoring for adherence to academic activities as planned and post processing of academic execution include-

- 1. Preparation of Academic Calendar and Activities Calendar
- 2. Course preference by teacher, and academic workload Distribution
- 3. Preparation of Timetables
- 4. Course File preparation/Update
- 5. Curriculum Delivery
- 6. Internal Exams conduction and assessment
- 7. Lab Conduction and Continuous Assessment
- 8. Weekly/Monthly/End-Semester academic activities review and monitoring
- 9. Mock Practical Exam Conduction and Assessment
- 10. Feedback analysis, and action

File Description	Document
Upload Additional information	<u>View Document</u>
Link for Additional information	View Document

1.1.3 Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and/are represented on the following

Page 19/107 08-01-2022 10:12:08

### academic bodies during the last five years

- 1. Academic council/BoS of Affiliating university
- 2. Setting of question papers for UG/PG programs
- 3. Design and Development of Curriculum for Add on/certificate/ Diploma Courses
- 4. Assessment /evaluation process of the affiliating University

### **Response:** B. Any 3 of the above

File Description	Document
Institutional data in prescribed format	<u>View Document</u>
Details of participation of teachers in various bodies/activities provided as a response to the metric	View Document
Any additional information	<u>View Document</u>
Link for Additional information	View Document

### 1.2 Academic Flexibility

# 1.2.1 Percentage of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

Response: 100

### 1.2.1.1 Number of Programmes in which CBCS / Elective course system implemented.

Response: 14

File Description	Document
Minutes of relevant Academic Council/ BOS meetings	View Document
Institutional data in prescribed format	<u>View Document</u>
Any additional information	View Document
Link for Additional information	View Document

### 1.2.2 Number of Add on /Certificate programs offered during the last five years

Response: 69

### 1.2.2.1 How many Add on /Certificate programs are offered within the last 5 years.

2020-21	2019-20	2018-19	2017-18	2016-17
17	18	18	10	6

File Description	Document
List of Add on /Certificate programs	View Document
Brochure or any other document relating to Add on /Certificate programs	View Document
Any additional information	View Document
Link for Additional information	View Document

# 1.2.3 Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years

**Response:** 40.3

# 1.2.3.1 Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
998	835	721	763	637

File Description	Document
Details of the students enrolled in Subjects related to certificate/Add-on programs	View Document
Any additional information	View Document

### 1.3 Curriculum Enrichment

# 1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics ,Gender, Human Values ,Environment and Sustainability into the Curriculum

### **Response:**

The institute is affiliated to Savitribai Phule Pune University (SPPU; the institute follows the curriculum prescribed by the university. The curriculum design and development process is carried out by the affiliating university based on the needs of the society. Curriculum is revised at regular intervals. The institute/department/BoS collects regular feedback from all stakeholders, viz., students, parents, faculty

members, professional bodies, and recruiters. The suggestions proposed are analyzed and the recommendations are communicated to the affiliating University though Dean (Faculty of Science and Technology), Chairman and/or member of Board of Studies, and during curriculum design and development workshops. Some of the senior faculty members are representing as Dean (Faculty of Science and Technology), Chairman and/or member of Board of Studies. Earlier version and present curricula includes the topics such as environmental studies, Safety, security, ethics, social awareness, humanity and social science, professional Code of Conduct and similar subjects. To supplement the cross cutting issues such as Gender, Climate Change, Environmental and sustainability, Human Rights, ICT, Human values, special efforts are put various platforms and activities as-

- Grievances Redressal Cell, Women Grievances Redressal Cell, Sexual Harassment Redressal Cell, SC-ST Support Cell, Anti-ragging Cell exists in the institution,
- Active NSS Chapter and student clubs at each department regularly conduct various events/ programs like "Save Girl Child", "Tree Plantation Program and Environment awareness programs", "Jal Abhiyan", "Save Environment", "Godavari River Cleaning", "No Vehicle Day", "No vehicle day" and similar many more.
- Rallies, street plays and many awareness programs are organized to educate people to various issues like- Water Conservation, gender equality, and Road Safety.
- Visits and donations to orphanages, old-age home, villages are reguary arranged.
- Special IT person is appointed for each non-IT department for value addition of computer and IT Knowledge.

File Description	Document
Upload the list and description of courses which address the Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.	View Document
Any additional information	View Document

# 1.3.2 Average percentage of courses that include experiential learning through project work/field work/internship during last five years

Response: 2.34

# 1.3.2.1 Number of courses that include experiential learning through project work/field work/internship year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
12	12	12	12	12

File Description	Document
Programme / Curriculum/ Syllabus of the courses	View Document
MoU's with relevant organizations for these courses, if any Average percentage of courses that include experiential learning through project work/field work/internship	View Document
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View Document
Any additional information	View Document

# 1.3.3 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year

Response: 33.38

### 1.3.3.1 Number of students undertaking project work/field work / internships

Response: 653

File Description	Document
List of programmes and number of students undertaking project work/field work//internships	<u>View Document</u>

### 1.4 Feedback System

# 1.4.1 Institution obtains feedback on the syllabus and its transaction at the institution from the following stakeholders 1) Students 2) Teachers 3) Employers 4) Alumni

**Response:** A. All of the above

File Description	Document
Any additional information (Upload)	View Document
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management (Upload)	View Document
URL for stakeholder feedback report	View Document

### 1.4.2 Feedback process of the Institution may be classified as follows: Options:

- 1. Feedback collected, analysed and action taken and feedback available on website
- 2. Feedback collected, analysed and action has been taken

- 3. Feedback collected and analysed
- 4. Feedback collected
- 5. Feedback not collected

Response: A. Feedback collected, analysed and action taken and feedback available on website

File Description	Document
Upload any additional information	<u>View Document</u>
URL for feedback report	View Document



### **Criterion 2 - Teaching-learning and Evaluation**

### 2.1 Student Enrollment and Profile

### 2.1.1 Average Enrolment percentage (Average of last five years)

Response: 30.15

### 2.1.1.1 Number of students admitted year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
216	200	140	221	209

### 2.1.1.2 Number of sanctioned seats year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
654	654	654	654	654

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

# 2.1.2 Average percentage of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years (exclusive of supernumerary seats)

Response: 51.61

# 2.1.2.1 Number of actual students admitted from the reserved categories year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
154	131	87	143	143

File Description	Document
Average percentage of seats filled against seats reserved	View Document
Any additional information	View Document

### 2.2 Catering to Student Diversity

# 2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

### **Response:**

The institute has the scientific and systematic methodology for the assessment of the learning levels of the learners. The methodology heavily relies on internal assessment, university examination results, participation in various curricular and co-curricular activities and responses received in classroom and laboratories. To ascertain the learning level of the learner in question is a big task and it is carried out by Course Instructors, Mentors and Class Coordinators through continuous monitoring of the students' academic performances, interactions in mentor sessions and their participation in various curricular and co-curricular activities. This process is dynamic and the learner level may modify during the semester. By assigning the appropriate weigtages to the criteria the learner is recognized as Advanced/Normal/Slow learner.

Advanced Learners are fed with the assignments and tasks identified as higher level of learning. The utmost care has been taken to satisfy their intellectual needs so as to deal with their intellectual appetite. They are encouraged to guide their peers in laboratory sessions and study circles. Their ideas and thoughts are carefully entertained and further platforms are provided to showcase their talent. They are encouraged to organize and participate in technical programes/events and group activities to further develop their analytical skills and problem-solving abilities which also help to enhance their presentation skills. The departmental clubs and professional body chapters aid in organizing and promoting such activities. They are also encouraged to appear for the MOOC courses/certifications offered by Swayam(NPTEL)/Coursera/Professional Bodies/Colleges and Universities and events organized by Professional Bodies, Colleges and Universities. Special appreciation awards are distributed for the meritorious students at the time of Annual Day.

**Slow learners** are identified as slow learners who have the problems of lapse in concentration and weak in grasping the course contents and they cannot exhibit the expected level of performance in academics.

The Institute has the dedicated staff participating in academic counselling process mostly confined to slow learners. Mentors too have the cordial relationship with the mentee to understand and resolve the issues/problems of slow learners. Morale boosting, encouragement and motivation are the keys during the counselling/mentoring to help uplift the morale of the slow learners.

Additional programmes / sessions / tutorials are arranged for the slow learners so as the Course Instructor/Subject Expert can come to the level of learner and help them to understand course contents. Attention to the individual learner works well in majority of the cases. These learners are provided with simple and elucidated lecture notes/course materials and question banks with model answers. Their progress and responses are meticulously monitored to reassess their learning levels and appropriate actions are taken time to time to achieve the elevated outcomes. Guidance provided by the advanced learners in the sessions and study circles also contributes to the improvement of academic results of the slow learners. This whole activity is conducted without directly pointing at the learning levels of the learners.

Page 26/107 08-01-2022 10:12:12

File Description	Document
Upload any additional information	<u>View Document</u>
Past link for additional Information	View Document

2.2.2 Student- Full time teacher ratio (Data for the latest completed academic year)		
Response: 17.31		
File Description Document		
Any additional information View Document		

### 2.3 Teaching- Learning Process

### 2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

### **Response:**

Many of the courses in the curriculum are laboratory courses where students gain the practical and experiential learning. The institute highly encourages and practices experiential learning, participative learning and problem solving methodologies by implementing various student centric processes.

The following practices, methodologies and initiatives have resulted in enhanced learning experiences.

### • Industry and Field Visits

Industrial visits and field visits are periodically organized to expose the students to understand the industrial working, use of technologies, use of modern tools and equipments and industrial culture contributing to the experiential learning. Few courses in curricula highly recommend such visits for augmenting the subject knowledge.

### • Internships

Many Final year students and few pre-final year students undergo industry internships during summer and winter vacations. Internships add to the experiential learning of the learners and significantly improve their problem-solving skills and industry perception as they usually work on small projects, execute few tasks, learn industrial practices and inculcate the industrial environment.

### • Project Based Learning

Curriculum revised on year 2019, has a course, Project Based Learning, where students learn in laboratories to execute certain assignments in the form of small projects. Final year projects, miniprojects and Project Based Learning are important components in the curriculum of affiliated university, allowing the students to undergo active experimentation and learn by doing the things. In project-based learning students solve problems, get hands-on experience of using real world problems, modern tools, equipment,

Page 27/107 08-01-2022 10:12:13

instruments and machineries.

#### • Field work

The vibrant NSS unit of the institute has been playing a vital role in supporting experiential learning by undertaking various field activities to educate the villagers. During this work students accumulate cross cutting issues, social aspects and special needs of the masses. The programmes like Civil engineering have courses related to surveying. Students perform technical surveys to analyze the components confined to Engineering domain.

### • Participation in technical, co-curricular events and Competitions

Institute takes keen interest to motivate and promote the students for participation in various events, competitions and hands on workshops and trainings. Individuals and teams from institute participate in various events at inter-institute level and few have secured prizes and awards. Participation in such competitions proves their skills for participative and experiential learning. These activities also develop their aptitude, attitude, design skills and problem solving techniques.

### • Visits to various expos and Exhibitions

Students participate and visit various expos and exhibitions and acquaint with exposure to current trends in technology. It adds to competitiveness of students.

### • Pedagogical techniques with efficacy

The course instructors keep the students engaged. They use participative learning through various pedagogical techniques such as demonstrations, group discussions, group tasks, quizzes and role-play during the teaching-learning process and in department club activities help students to develop different dimensions of their personalities helping in employability.

### MoUs and Industry Sponsored Labs

Institute has collaborated and signed MoUs with few industries. With the support of Industry few labs have been set up and training programmes have been arranged resulting in enrichment of faculty and students.

File Description	Document
Upload any additional information	View Document
Link for additional information	View Document

### 2.3.2 Teachers use ICT enabled tools for effective teaching-learning process.

### **Response:**

The faculty of the Institute effectively use ICT enabled teaching learning methodologies and suitable

technologies for content delivery and learning. The institute has adequate facilities for providing interactive, modern, flexible, convenient and effective ICT enabled learning environment to the learners.

The methodology adopted, ICT tools and resources used are briefly described here.

Multimedia and Digital Content Delivery through ICT tools and resources:

- The sets of video lectures are prepared by each course instructor in the meticulous supervision of Institute head. These video lectures are available on Institute's own web server and the portal has been designed at the institute by considering all the needs of the learners named Matoshri Knowledge Base at learning.matoshri.edu.in.
- While preparing the Video lectures the course instructors use modern software, modelling software, compression tools, and an effective blend of appropriately identified components so as to help the learners to understand and inculcate even the intricacies in the courses. The visuals prepared by the staff give clear cut idea to the learners and help them to grasp the contents of the courses and beyond.
- The course instructors and laboratory instructor have elaborated the real world examples to improve the understanding of the students through video lectures.
- Class rooms and laboratories are equipped with projectors, internet connectivity and public address (PA) systems in the halls.
- Seminar halls and auditorium are equipped with audio-visual aids that includes projector, Public Address system and internet connectivity with ambience.
- Faculty use the ICT enabled infrastructure available in class rooms, laboratories and conference halls for the delivery of digital/multimedia contents.
- Digital/multimedia contents used by the faculty include Power Point Presentations, animations, graphics and videos. Faculty use innovative pedagogy techniques such as effective presentations, quizzes, brainstorming, role-play, animations etc. for the delivery of course content using ICT tools
- Various e-learning resources employed include course specific web resources, Swayam / NPTEL platform, MOOC platforms. Many students and Staff have successfully completed various MOOC certifications under SWAYAM-NPTEL and Coursera learning platforms. Few of the staff have secured the top all India ranks in NPTEL courses.
- Central library of the institute is ICT enabled with Personal Computers, internet connectivity, access to institutional repository of class notes, e-Books, e-Journal subscriptions and library OPAC system.
- The institute conducts online Multiple Choice Question (MCQ) based tests through the platforms like Google classroom.
- Open source learning management system, Google Classroom, Meet is used by the course instructors to provide assignments and for sharing the learning resources.
- Invited expert talks, guest lectures, training programs, seminar, workshops and webinars have been conducted using ICT facilities.

The ICT enabled learning environment with effective pedagogy techniques have transformed the learners at a different level of learning resulting in open and flexible delivery of the contents and has enhanced the students' ability to learn, think, create and communicate.

File Description	Document
Upload any additional information	<u>View Document</u>
Provide link for webpage describing the ICT enabled tools for effective teaching-learning process	View Document

# 2.3.3 Ratio of students to mentor for academic and other related issues (Data for the latest completed academic year )

Response: 20.38

2.3.3.1 Number of mentors

Response: 96

File Description	Document
Upload year wise, number of students enrolled and full time teachers on roll.	View Document
mentor/mentee ratio	View Document
Circulars pertaining to assigning mentors to mentees	View Document

### 2.4 Teacher Profile and Quality

### 2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 90.89

File Description	Document	
Year wise full time teachers and sanctioned posts for 5years(Data Template)	View Document	
List of the faculty members authenticated by the Head of HEI	View Document	
Any additional information	View Document	

# 2.4.2 Average percentage of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

**Response:** 5.22

2.4.2.1 Number of full time teachers with  $Ph.\ D.\ /\ D.M.\ /\ M.Ch.\ /\ D.N.B$  Superspeciality  $/\ D.Sc.\ /\ D.Litt.$  year wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
10	9	7	4	2

File Description	Document
List of number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. and number of full time teachers for 5 years (Data Template)	View Document
Any additional information	View Document

# 2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)

Response: 7.04

### 2.4.3.1 Total experience of full-time teachers

Response: 796

File Description	Document
List of Teachers including their PAN, designation, dept and experience details(Data Template)	View Document
Any additional information	<u>View Document</u>

### 2.5 Evaluation Process and Reforms

### 2.5.1 Mechanism of internal assessment is transparent and robust in terms of frequency and mode

### **Response:**

The internal assessment process is carried out transparently as a part of teaching-learning process covering assessments for internal evaluation of laboratory courses' term works, seminars, project-based learning, and final year projects.

The evaluation process and the rubrics of evaluation are made known to students through the course instructors and during the counseling. At the very first session, the course instructor explains the whole process of internal evaluation with examples so that students should be aware of the process beforehand. Students are also notified and acquainted with the distribution of marks and schedule of internal evaluation.

Workbooks for seminars, project-based learning, and projects are provided to the students in advance which include all the guidelines, rubrics, and schedule of activities related to continuous assessment. All

Page 31/107 08-01-2022 10:12:15

the activities and assessments are well documented and available to learners.

#### Laboratory work/term work: Internal Assessment

- Continuous assessment of each Laboratory term work head is carried out and known to the students. The laboratory work evaluation is the basis for the award of term work marks. The evaluation is based on A-P-P rubrics covering Attendance (A), Performance in Laboratory (P) of practical head and Punctuality in journal checking (P). Marks are awarded to the laboratory assignment accordingly. And final term work marks are calculated by considering the laboratory performance as a major share.
- Two internal examiners are appointed for each course's Term work which has an examination head as Term Work. These examiners evaluate final internal marks. Institute also notifies and clearly acquaint the students beforehand regarding the criteria and their weightages in the evaluation of term work marks. During the counseling sessions also all the doubts of the students regarding the term work evaluation are addressed.
- Final term work marks are displayed at the end of each semester for student information.
- Students are free to interact with the course instructor to resolve grievances if any, regarding the assessment.

### Internal assessment of seminar and project work-

Seminar and the final year project internal assessment is transparently carried out based on rubrics of evaluation that are made available to the students at the beginning of the final year first semester. Students are made well aware of evaluation rubrics so that they can focus on various aspects of evaluation and be aware of the expectations.

In Project Based Learning, learners are supposed to complete the Laboratory Projects by following all the processes and recommendations by updating the course instructor weekly about their progress.

Seminar work confined to the pre-final year students needs a thorough literature survey and seeking approval from the seminar guide. Before the final presentation, the student is supposed to meet the guide every fortnight to report and document the progress.

For the final year Project work, the mentor guides the student to the completion of the project. Progress presentations are scheduled bi-monthly and the group needs to interact with the mentor once a week to ensure proper progress of the project work and to seek suggestions.

File Description	Document
Link for additional information	<u>View Document</u>

# 2.5.2 Mechanism to deal with internal/external examination related grievances is transparent, time-bound and efficient

#### **Response:**

The Institute has Examination Cell that takes care of smooth conduction of various internal and external examinations. The committee belonging to the Examination cell is responsible for addressing and resolving the issues / grievances related to internal and external examinations.

The Cell observes transparency in dealing with the issues / grievances and most of the grievances are addressed and resolved in due course of time.

External (University) examination grievances are addressed by examination section under the supervision of Examination Committee as per the process laid down by the SPPU. To bring transparency in external examination related grievances, a separate large sized notice is displayed at examination section detailing general instructions and the processes to be followed for grievance redressal and the departments are informed time to time regarding the issues. Grivances and issues related to examination, assessment and Certificates are resolved by the institute with the help of Examination Section. With students application and necessary documentation such cases are communicated to the affiliated University for necessary action. Timely follow up of these grievances has been maintained.

Following is a typical process followed to resolve the grievances related to the external examination.

- Students grievances related to discrepancies/issues in the marks obtained in the University examinations are addressed through a two-step process prescribed by the University,
- 1. Application for obtaining photocopy of assessed answer sheets
- 2. Application for verification and re-evaluation.

Accordingly the examinee takes the decision after thoroughly going through the received answer sheet.

- Examination section displays notices for filling photocopy form, verification and revaluation form giving details about the applicable fees and last date of submission.
- Examination section collects the old mark sheet from the student in case of change in marks and distribute revised mark list to the student.

#### **Online Examinations-**

During online examination if the student finds any discrepancies in the question, he/she has an option to mark that particular question as an invalid question. The committee of subject experts appointed by the University assesses the queries related to the invalid questions. If the claim is found to be correct a decision is taken by the committee to award appropriate marks to concerned students.

### **Unit Tests and Preliminary Examinations-**

Institute conducts Unit tests and preliminary examination and the answer sheets of these internal examinations are evaluated internally by the concerned course instructors. In case of any discrepancies in the marks obtained, students approach the course instructor. The answer sheets are once again evaluated in front of the students and the grievances are resolved.

#### **Term-work Evaluation-**

Term-work marks are given based on continuous evaluation process based on the performance of the

Page 33/107 08-01-2022 10:12:15

students during the course of semester. Students are informed in advance the rubrics of continuous evaluation. Marks distribution is done based on evaluation of assignments, performance in internal Unit Tests, record in practical journals, performance of experiments and internal viva-voce. Grievances raised by the students regarding term-work marks are resolved collectively by course instructor, departmental academic coordinator and HoD.

File Description	Document	
Any additional information	<u>View Document</u>	
Link for additional information	View Document	

### 2.6 Student Performance and Learning Outcomes

2.6.1 Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.

### **Response:**

Program Outcomes (POs) and Course Outcomes (COs) of the all the programmes and courses are stated and communicated to the learners through institute website and using display boards at chosen prominent places in the respective department.

Program Outcomes (POs) are framed following the NBA defined program outcome statements. The Graduate attributes stated by NBA are accommodated while framing the Program Outcomes (POs). All Course Outcomes (COs) contribute towards attainment of Program Outcomes (POs).

### **Course Outcomes (COs):**

- For every course there are a few categorical statements targeted learning outcomes stated as Course Outcomes (COs).
- CO statements give an indication of the capacity of the learner or what a learner can do after the successful completion of the course.
- Unit wise course contents from the course syllabus forms the basis for constructing appropriate CO statements.
- The COs for individual course are framed with appropriate mapping or correlation with POs and PSOs. The correlation between each CO with each PO and PSO is mapped having correlation levels of either 1: Slight (Low) or 2: Moderate (Medium) or 3: Substantial (High). The process of mapping of CO's with PO's and PSO's give CO-PO and CO-PSO matrices respectively.
- CO statements address appropriate Blooms Taxonomy (BT) levels by considering a proper balance of lower, intermediate and higher order abilities and skills to be acquired by the learners.

#### **Mechanism of Communication of POs and COs:**

Every Programme's Program Outcomes and every Course's Course Outcomes are well defined, published and disseminated among various stakeholders to acquaint them through-

- Institute website -https://engg.matoshri.edu.in
- Display Boards in the Laboratories,
- Matoshri knowledge base- https://learning.matoshri.edu.in
- Course Files, prepared by course instructor for every course they teach
- Conveyed during teaching learning process
- Printed on laboratory manuals, project log book and seminar log book.

Course Outcomes (COs) are communicated to the learners through the following ways:

- COs are published through institute website- https://engg.matoshri.edu.in
- COs are made available for the ready reference of the learners through course syllabus copies, notes, hand-outs, lab manuals.
- Course syllabus copies, notes, presentations and lab manuals are also made available to the learners in digital media formats.
- COs are communicated and discussed with the learners during teaching learning process at the commencement of the respective course and also during the progress of the semester.
- In the Video Lecture series the respective course coordinator begins the course with the course objectives and course outcomes.

File Description	Document
Upload COs for all Programmes (exemplars from Glossary)	View Document
Past link for Additional information	View Document

#### 2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

#### **Response:**

The Institute has a well defined process of evaluating attainment of programme outcomes and course outcomes. Since the Institute is affiliated to State University, the evaluation parameters are defined by the University and are clearly described in the curriculum provided by the University. The heads used for evaluation are Theory Paper, Practical, Oral, Project, Seminar and Term Work. In addition to these, the Institute uses its own heads for the evaluation at Institute level. The heads used for the evaluation at the Institute level are Test Exams, Assignments, Mock Practical Exams and Reports. The evaluation of Course Outcomes is carried out by the External Evaluation Process, which is carried out based on assessment tools used at University and Internal Evaluation Process which is carried out based on assessment tools used at Institute level. For the evaluation the results of University exams and internal evaluation records are considered as data for the evaluation process.

Considering the University Syllabus Revision years and Merit of the admitted students at the Institute the initial target for External Assessment has been defined. The attainment levels based on percentage of students and pre-decided targets are defined as Attainment Level 1, Attainment Level 2 and Attainment Level 3. Considering the evaluation parameters of an Assessment Head, University evaluation result and as per the defined attainment levels the attainment of individual evaluation parameter is calculated.

Evaluation of specific course is a weighted sum of evaluation parameters used for the respective course heads. The target is redefined based on the resultant attainment level.

The target for internal assessment for the specific assessment parameter considered for the internal assessment is the average of the marks obtained by the students. The attainment level of an individual assessment parameter for the internal assessment is calculated considering the attainment levels defined. Evaluation of specific course is a weighted sum of evaluation parameters used for the respective course heads. The evaluation parameters for the theory course are Test exams, assignments and for Practical course are mock practical exams and records. For evaluation of Course Outcome certain weightages have been given to the external assessment and internal assessment. All the set of COs of the Programme is mapped to POs and PSOs of the Programme. The course outcomes contribute to attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs). If particular PO(s) and PSO(s) are not attained to expected level then appropriate actions are taken so as level of satisfaction is attained. In case if attainment is met then target is revised at the higher level for further course of action.

Attainment levels defined for both internal and external assessment are:

- Level 1: 50% students scoring more than or equal to set attainment level
- Level 2: 60% students scoring more than or equal to set attainment level
- Level 3: 70% students scoring more than or equal to set attainment level

For evaluation of Course Outcome 80% weightage has been given to the external assessment and 20% weightage has been given to internal assessment.

File Description	Document	
Upload any additional information	View Document	
Paste link for Additional information	View Document	

### 2.6.3 Average pass percentage of Students during last five years

Response: 86.79

# 2.6.3.1 Number of final year students who passed the university examination year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
645	620	465	416	598

# 2.6.3.2 Number of final year students who appeared for the university examination year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
653	647	603	515	734

File Description	Document
Upload list of Programmes and number of students passed and appeared in the final year examination (Data Template)	View Document
Upload any additional information	<u>View Document</u>
Paste link for the annual report	View Document

### 2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding	teaching learning process
Response: 3.53	

File Description	Document
Upload database of all currently enrolled students (Data Template)	View Document

### Criterion 3 - Research, Innovations and Extension

#### 3.1 Resource Mobilization for Research

3.1.1 Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

**Response:** 0

3.1.1.1 Total Grants from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
List of endowments / projects with details of grants	View Document

### 3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)

**Response:** 5.31

### 3.1.2.1 Number of teachers recognized as research guides

Response: 06

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	<u>View Document</u>

### 3.1.3 Percentage of departments having Research projects funded by government and non government agencies during the last five years

Response: 0

# 3.1.3.1 Number of departments having Research projects funded by government and non-government agencies during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

#### 3.1.3.2 Number of departments offering academic programes

2020-21	2019-20	2018-19	2017-18	2016-17
7	6	6	6	6

File Description	Document
List of research projects and funding details	<u>View Document</u>

### 3.2 Innovation Ecosystem

### 3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

#### **Response:**

The Institute got permission from AICTE and the approval for five PG programs. These programs are run by the institute and state-of-the-art infrastructure has been established by the institute to support the research activities of the students and staff. The institute has recognition by the affiliated University for the three Research Centers, Ph.D. programs. The number of Researchers who have completed their research work in the last five years is twelve and currently, twenty-three research scholars are pursuing their Research. **Thirteen Research Guides** are available at the Research Centre. The Institution has a research committee to monitor and address the research activities. The committee comprises of-

- Chairman- Principal Dr. G. K. Kharate,
- R&D Coordinator- Vice-Principal Dr. V. H. Patil,
- Research Center Coordinator- Dr. J. J. Chopade
- Member- Dr. J. H. Bhangale and
- 03 external subject experts

The committee has a working plan to emphasize the research component related to the projects undertaken. And the processes related to the research are closely monitored and necessary recommendations and suggestions are sought from time to time. The committee has recommended that the research scholars are expected to register for IPR/Patent, quality publications and motivate the faculty to register for Ph.D. As a result of these suggestions and recommendations, **10 patents** have been filed and **105 copyrights** have been registered.

Recently the Institute has submitted the proposal to the affiliated University to start the Incubation Centre at the Institute under the umbrella of the affiliated University.

Full liberty is extended to all faculty to apply and undertake any of the research proposals. Full autonomy is extended to all faculty to utilize funds for materializing the research projects. Any of the

Page 39/107 08-01-2022 10:12:18

required modern tools, databases, datasets, and information is provided to the aspirant researchers.

Special expert talks of Industry Experts, Alumni, and Entrepreneurs are constantly organized to guide the students and the aspirant researchers. Many of the researchers from various institutes are affiliated with a research center as guides.

Students and staff are informed about various equipment and research facilities available in the institution and they are encouraged to use the same.

Institute has collaborated with the industry in the development of Labs/Usage of Equipment for the departments Mechanical Engineering, Computer Engineering and Electronics, and Telecommunication. With the use of the software provided under 'IBM Excellence Centre' - IBM Rational Rose Suite(RSA), it is evident that the fourth year students use it effectively for project modeling and it adds to the employability of students. The 3D printing facility is used by interested students to gain extra knowledge of their interests. These students are trained under MOU signed by the institution. Students and Staff utilize these facilities and infrastructure for knowledge acquisition, project development, and research.

The Institute organizes special talks and programs to acquaint the students with entrepreneurship development. Institute pays special attention to nurture the research culture. Various infrastructural facilities, modern tools, equipment, and facilities are available to help the researchers to pursue the research.

File Description	Document	
Upload any additional information	View Document	
Paste link for additional information	View Document	

# 3.2.2 Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the last five years

#### **Response:** 14

# 3.2.2.1 Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
1	1	3	4	5

File Description	Document
Report of the event	View Document
List of workshops/seminars during last 5 years	View Document
Any additional information	View Document

### 3.3 Research Publications and Awards

### 3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years

**Response:** 3

### 3.3.1.1 How many Ph.Ds registered per eligible teacher within last five years

Response: 9

### 3.3.1.2 Number of teachers recognized as guides during the last five years

Response: 3

File Description	Document
List of PhD scholars and their details like name of the guide, title of thesis, year of award etc	View Document
Any additional information	View Document

# 3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the last five years

Response: 0.14

# 3.3.2.1 Number of research papers in the Journals notified on UGC website during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
3	2	4	4	6

File Description	Document
List of research papers by title, author, department, name and year of publication	View Document
Any additional information	View Document

### 3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/international conference proceedings per teacher during last five years

Response: 0.04

# 3.3.3.1 Total number of books and chapters in edited volumes/books published and papers in national/international conference proceedings year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
2	1	0	2	0

File Description	Document
List books and chapters edited volumes/ books published	<u>View Document</u>
Any additional information	View Document

#### 3.4 Extension Activities

3.4.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.

#### **Response:**

Our institute has a National Service Scheme (NSS) unit which is sanctioned by the affiliated University, Savitribai Phule Pune University with a sanctioned strength of 50. The prime objective of affiliated University is to sanction the NSS unit and provide financial support for National Service Scheme (NSS) so as to give an extension dimension to the higher education system and orient the student youth to community service while they are studying in an educational institution. It helps to understand the problems of the community, to take the part in social activities, and interact with society. Every year the NSS camp is organized for the duration of 7 days in a rural area, which is monitored by the University coordinator. The separate budget is sanctioned by the Institute for the NSS camp and other activities. The NSS coordinator who has got the approval from the University has to submit the detailed annual report and Audit report to the University for Continuation of the NSS unit.

The NSS unit at our institute is vibrant and the NSS members voluntarily participate in various social activities such as tree plantation, blood donation, village cleaning, creating awareness among the villagers and slum dwellers about digital / online transaction and various government schemes, women empowerment, disaster management, security and safety measures, health and sanitary awareness, construction of water reservoir, health checkups, the importance of organ donation, educational/vocational guidance and service to afflicted and downtrodden. It is felt that NSS members' interaction with the common villagers and slum dwellers will expose them to the realities of life and bring about a change in their social perception.

The various camps have a very good impact on the holistic development of students. Students also reported that there was a really great improvement in their social life. Working in NSS camps has furnished the life of students and they are getting good help during their working culture too. The students have contributed to various social and environmental problems and they have come across that, the strategic theory implemented has benefitted the students as well as the people of the society to a very larger scale. Planting of trees, cleaning of various social pace, spreading awareness to people about the importance of the Environment and its conservation are the key activities conducted every year by the NSS unit. The students also engage themselves voluntarily in the programs like 'Ganesh Idols Collection' to protect the river from pollution.

Students have been also benefited from street play during their interviews and group discussions and have been getting the importance of working in groups. Entirely the students have been benefited in its overall development and it is impacting their social as well as economical life.

File Description	Document	
Upload any additional information	View Document	
Paste link for additional information	View Document	

# 3.4.2 Number of awards and recognitions received for extension activities from government/government recognised bodies during the last five years

#### Response: 0

# 3.4.2.1 Total number of awards and recognition received for extension activities from Government/Government recognised bodies year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Number of awards for extension activities in last 5	View Document
year	

# 3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years

#### Response: 43

3.4.3.1 Number of extension and outreached Programmes conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., yearwise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
6	10	7	12	8

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach Programmes conducted with industry, community etc for the last five years	View Document
Any additional information	View Document

# 3.4.4 Average percentage of students participating in extension activities at 3.4.3. above during last five years

Response: 19.37

# 3.4.4.1 Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
183	92	232	1024	415

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Govt or NGO etc	View Document
Any additional information	View Document

#### 3.5 Collaboration

3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/internship per year

**Response:** 15

3.5.1.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/

Page 44/107 08-01-2022 10:12:21

### internship year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
3	3	3	3	3

File Description	Document
e-copies of related Document	View Document
Details of Collaborative activities with institutions/industries for research, Faculty exchange, Student exchange/ internship	View Document
Any additional information	View Document

# 3.5.2 Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the last five years

### **Response:** 13

# 3.5.2.1 Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
4	2	2	2	3

File Description	Document
e-Copies of the MoUs with institution/ industry/corporate houses	View Document
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	View Document
Any additional information	View Document

### **Criterion 4 - Infrastructure and Learning Resources**

### 4.1 Physical Facilities

4.1.1 The Institution has adequate infrastructure and physical facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc.

### **Response:**

Institute has a scenic landscape, aesthetic architecture, eco-friendly environment, spacious classrooms, drawing halls, well equipped laboratories and good infrastructure spread over 10 acres. The Institute has well-furnished, spacious, well ventilated and well illuminated classrooms. Classrooms are maintained as per norms for proper visibility and audibility. The classrooms are equipped with adequate furniture, blackboard, projectors, fans, lights and power backup.70% of the classrooms are provided with LCD projectors and LAN / Wi-Fi connectivity. The Institution has domain centric laboratories as per the rules and regulations of AICTE and Savitribai Phule Pune University, Pune. Adequate and well-maintained equipment are procured to conduct the experiments. The laboratories are kept open beyond the working hours depending on the need of the students. Sufficient safety measures have been incorporated and are displayed at select locations in the laboratories. All equipments are always checked for faults, calibration and wear and tear and accordingly proper actions are taken. Before the commencement of every semester faculties ensure the availability of required software/equipment for the smooth conduction of the laboratory experiments. Laboratories are equipped with sufficient hardware and/or software to run program specific curriculum and adequate number of personal computers are available for the smooth conduction of the experiments. The class room area and labs area are as per the AICTE norms. The college has the seminar halls and conference hall with LCD projectors and screens, audio systems, white boards and a computer with Internet connectivity for conducting hands-on, courses, co-curricular activities/extra - curricular activities, parent teacher meetings, campus recruitment training classes, campus recruitments, meetings, seminars, conferences, webinars, guest/expert lectures, and workshops for students and faculty. The halls are provided with adequate seating capacities. The classrooms in various departments have been provided with modern teaching aids for supporting the teaching learning process. Every department has separate computer lab(s) for conducting programming & simulation experiments to enhance the skills of the students. Faculties are provided with desktops with internet connectivity. The Workshop is provided for turning, welding, fitting and smithy. It has adequate lathe machines and other machineries to conduct the workshop practices. The staffs in the workshop are skilled to fabricate indigenous facilities and material in the campus. A health care center provides first aid facilities and the Society has its own hospital for any medical emergency. An ambulance is available 24X7 to meet emergencies. Canteen facilities are also provided for students & staff which has adequate seating capacity. Food served is hygienically prepared and has reasonable price. The institute is powered with solar power.

File Description Document	
Upload any additional information	<u>View Document</u>
Paste link for additional information	View Document

**4.1.2** The Institution has adequate facilities for cultural activities, sports, games (indoor, outdoor), gymnasium, yoga centre etc.

Page 46/107 08-01-2022 10:12:22

#### **Response:**

Cultural activities are important for the students such activity is a way of recreation and it results in soothing effects. Due to the cultural activities, various qualities are developed among the students like: interpersonal communication, teamwork, leadership, organizing capability, elimination of stage freight and confidence building. These events help to explore the hidden talents and special interests. The Institute has set up the Cultural Club. The members of the Club are three staff members: one of them is the Chairman, Cultural Secretary which is elected by the students, and three student members those are nominated by Chairman, Cultural Club.

Separate room is available for the Cultural Club and the most of the musical instruments and PA system are available. The cultural events are organized during NSS camp, Annual Social Gathering and Farewell functions. The cultural activities organized under the Cultural Club are: Singing, Dancing, Drama, Skit, Mimicry, Antakshari, Instrumental, Anchoring, Fashion Show, Photography, Sketching, Rangoli, Painting, Decorations, Mismatch day, Group day, Traditional day, Sari day, Tie day, Halloween day, and Street Plays. In addition to this personal mentoring is provided for environment friendly Ganapati Idol Making for interested staff and students. The students performing the best at the Annual Social Gathering are awarded in each category of performance and Mister and Miss are awarded based on the excellence in various performances.

The Cultural activities organized by the Institute results in motivating the students and staff for the cultural events. The faculty, Ms. Sneha Kulkarni, had participated in 'Maharashtracha Superstar and secured the runner-up at state level completion eventually same staff had starred in a Marathi Movie, 'Yedyanchi Jatra', a student, Mr. Shubham Hengade has participated in a national level event 'Chief Minister for a day', a student Mr. Harshal More is a professional Sculptor and Mr. Devandra Jagtap is an actor in daily soap.

The Institute has developed the sports facilities in campus. It includes Two Volleyball Courts, a Basketball court, Kabaddi and Kho-Kho grounds, Cricket ground, Football ground and indoor facilities for Table Tennis, badminton, Chess, and Carom. In addition to this to maintain the fitness separate green gymnasium and yoga hall are available in campus. Every year fitness checkup camp was organized and fitness report in terms of marks was submitted to the affiliated University. The University organizes different Outdoor and Indoor games at intercollegiate level, zonal level and University level. Every year the college students have participated in different sports at intercollegiate level. A student, Namita Sanap had represented football three times as a player in University team and one time as a captain of the University team. Other student, Ashish Nimbalate has represented swimming competition two times at University level. Every year the competitions within college are organized for indoor and outdoor games.

The institute has a Green Gymnasium in the premises for enthusiasts and those having the fitness concern. Separate Yoga Hall is also available for Yoga practices. Institute celebrates Yoga day every year and organize Yoga based programmes for staff and students.

File Description	Document
Paste link for additional information	View Document

# 4.1.3 Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc. (Data for the latest completed academic year)

Response: 50

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 21

File Description	Document
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	View Document
Upload any additional information	View Document
Paste link for additional information	View Document

# 4.1.4 Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years(INR in Lakhs)

Response: 11.5

# 4.1.4.1 Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
78.5	50.84	26.7	90.17	94.23

File Description	Document
Upload Details of budget allocation, excluding salary during the last five years (Data Template)	View Document
Upload audited utilization statements	View Document

### 4.2 Library as a Learning Resource

### 4.2.1 Library is automated using Integrated Library Management System (ILMS)

### **Response:**

Institute has set up the Library facility at the department level as well as at the central level named as Department Library and Central Library respectively. The department Library includes set of books only. The major library resources are available at the Central Library. The Central library has rich collection of

text books, reference books, handbooks in a form of hard copies and e-books. The hard copies available in the library are 15539 volumes and in excess of 8832 e-books. The Institute has a Membership of NDL, which provides the online access to various learning resources such as audiovisual and text resources. The library has subscribed 89 Print Journals & Magazines. In addition to this the Institute has subscribed for DELNET which provides access to 10839 free E-books in 709 categories and 400 e-journals for engineering and technology. Daily newspapers and periodicals are available in the Library. As per the decision taken by the Statutory Body of the affiliated University about the access of Jayakar Library for the affiliated colleges, the remote access to the Affiliated University's Jayakar Library is available for e-journals and e-books databases. Jayakar Library has a rich collection of e-journals and e-books.

The Central Library has a separate digital library equipped with 27 nos. of computers with internet and intranet facilities. For the smooth functioning of library and for the ease of the students a computer interface has been provided. It is equipped with NPTELs audio- video lectures, CDs of Engineering courses, and Bound Volumes of Journals

The Central library of Institute has provision of spacious reading room for 200 students. It offers very peaceful ambience for students. It remains open normally from 8 am to 5pm but during exam period Library timing is extended from 8 am to 6 pm.

Timings: During working day, weekend, and vacation.

Day	Timings	
Working Days	8.00 am to 5.00 pm	
Examination Days	8.00 am to 6.00 pm	
Vacation	8.00 am to 5.00 pm	

All the students, faculty members and employees of the institute are entitled for the membership of library. Books are issued to every student, faculty, Visiting faculty and Lab assistant as per the library rules given below:-

S.No	CATEGORY NO.O		F BOOKS LOAN PERIOD		RIOD	
1	Faculty		05 One		ne Semester	
2	Lab Assistant	03		One Se	emester	
3	Visiting Faculty		02	·	One Week	
4	FE Students		02		Seven Days	
5	SE Students		03		Seven Days	
6	TE Students		03		Seven Days	
7	BE Students		04		Seven Days	
8	ME Students		04		Fourteen Days	
9	FE,SE,TE,BE Students (Book Bank)		Set of 5 Books		One Semester	

The Library follows open access system encouraging the user to browse freely in the stack area. It is partially automated using the following Integrated Library Management System:-

• Name of ILMS software :- DELPLUS

• Nature of Automation:- Partially

- Version:- 2.0
- Year of Automation:- 2012
- QR Code Scanning

OPAC (Online Public Access Catalogue) is placed in the user area for the library users to access the OPAC.

File Description	Document
Upload any additional information	View Document
Paste link for Additional Information	View Document

### 4.2.2 The institution has subscription for the following e-resources

- 1.e-journals
- 2.e-ShodhSindhu
- 3. Shodhganga Membership
- 4.e-books
- 5. Databases
- **6.** Remote access to e-resources

**Response:** A. Any 4 or more of the above

File Description	Document
Upload any additional information	View Document
Details of subscriptions like e-journals, e- ShodhSindhu, Shodhganga Membership, Remote access to library resources, Web interface etc (Data Template)	View Document

# 4.2.3 Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

Response: 1.56

# 4.2.3.1 Annual expenditure of purchase of books/e-books and subscription to journals/e- journals year wise during last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
1.93	4.78	0.07	0.18	0.85

File Description	Document
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the last five years (Data Template)	View Document
Audited statements of accounts	View Document

## 4.2.4 Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the latest completed academic year

Response: 7.88

4.2.4.1 Number of teachers and students using library per day over last one year

Response: 163

]	File Description	Document	
]	Details of library usage by teachers and students	View Document	

### 4.3 IT Infrastructure

### 4.3.1 Institution frequently updates its IT facilities including Wi-Fi

### **Response:**

Matoshri College of Engineering & Research Center ensures an extensive use of ICT resources by providing adequate access to computers and internet to its students and faculty. The Institute has procured the necessary hardware and software progressively, depending on academic requirements, technological updates, upgrades and special requirements. Usage of Open Source software is highly encouraged in the institute. The IT experts in the institute guide and suggest the appropriate hardware and software platforms depending on the requirements of the learners and the staff.

The Institute has a Central Server, from where the internet access is routed in the Institute. The Server has state-of-the-art configuration and it is failsafe. The networking of the computing resources has been designed, installed, monitored and maintained in-house by the Institute. Back-up server is also available at the central networking place. The central Server room is provided with adequate cooling and power backup.

Currently 600 computing nodes are connected to the wired intranet. The switching and routing equipments used in the networking are robust and efficient enough to satisfy the needs of the end-users. The initially used CAT5 cables have been replaced by CAT6 cables compatible to sustain the bandwidth requirements within the LAN and Intranet.

In the unprecedented and challenging circumstances of pandemic the Institute has created a repository of recorded video lectures of the staff, named as Matoshri Knowledge Base. These video resources are well organized and maintained module wise for the systematic learning. Learners access these resources and

provide the feedbacks. All the course coordinators have uploaded their video lectures on this portal for ready reference to the learners.

Periodically the computing hardware have been aggregated to comply with the modern system software and application software. The rich set of system software, application software and antivirus/antimalware software are available in the institute. Special modeling software for Mechanical Engineering, Civil Engineering and Electrical Engineering are also available. Modern and State-of-the-art Integrated Development Platforms are available for coding and application development.

As the network has been expanded the networking devices have also been procured and installed at appropriate location ensuring the ceaseless connectivity. With the increasing number of networking nodes the bandwidth of the internet connectivity has also been revised and upgraded for time to time.

For the efficacy in content delivery the institute has made available the platforms and software to the faculty. Adequate number of standard webcams has been procured and the faculties are using these webcams for content delivery and recording of video lectures as well.

The Institute has purchased the web space to upload and maintain the video lectures of the teachers.

Starting with 2 Mbps leased line at the time of establishment of the Institute the Institute has upgraded and increased the bandwidth to total 64 Mbps today. All the classrooms, programming laboratories, seminar halls, Library, Office, HoD cabins and auditorium are connected with high speed internet. WiFi facility is also available in the premises for the legitimate users.

File Description	Document	
Upload any additional information	<u>View Document</u>	
Paste link for additional information	View Document	

### 4.3.2 Student - Computer ratio (Data for the latest completed academic year)

#### Response: 2.7

File Description	Document	
Upload any additional information	<u>View Document</u>	
Student – computer ratio	View Document	

### 4.3.3 Bandwidth of internet connection in the Institution

Response: A. ?50 MBPS

File Description	Document
Upload any additional Information	View Document
Details of available bandwidth of internet connection in the Institution	View Document

### **4.4 Maintenance of Campus Infrastructure**

4.4.1 Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years(INR in Lakhs)

Response: 2.95

### 4.4.1.1 Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year-wise during the last five years (INR in lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
11.37	25.89	12.65	22.31	14.24

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)	View Document
Audited statements of accounts	View Document

# 4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

#### **Response:**

The institution has the structured system for maintaining and utilizing the facilities available. The Facility management team maintains the physical and academic support facilities. The various responsibilities of the team are housekeeping activities, maintenance of Garden, entire campus work etc. It deployed location supervisors across the campus. Each location supervisor reports to the maintenance manager regarding his observations on electrical, plumbing, and housekeeping related issues/complaints. A logbook is maintained for the same. The college provides transportation facilities for its faculties and students. A transport committee is constituted to address and rectify any transport related issues. The security of the institute is taken care by in house security guards with the help of an external private agency in two shifts round the clock. The institution has outdoor and indoor doctor of its own. Hence any sort of medical emergency can be immediately addressed.

#### **Laboratory Maintenance**

All the laboratories are spacious and well. Do's & Don'ts and safety precautions are displayed in each laboratory. Periodical maintenance is carried out in all laboratories. In house servicing of the lab instruments are done every six months. Major repairs are outsourced by following the procedure of the institute. Consumables are purchased every year. Instruments are calibrated wherever required. Lab assistant & faculty members are trained to do the repairs as applicable. All electrical wirings and grounding are done as per the norms. First aid box, fire extinguisher and hand gloves, welding goggles are provided wherever necessary. After each semester internal dead stock verification is carried out and at the end of the academic year external dead stock verification is conducted and depending on the verification report actions are taken.

#### Library maintenance

There is regular stock verification process carried out by the library. A file is maintained which contains the stock verification reports carried out at different intervals. Physical verification of the library stock is the process by which the accession register is tallied with the books in the library. It gives the overall picture of the available documents in the library. Stock verification provides opportunities to weed out long unused, very old editions of the books from the library. It also leads to the cleaning and dusting of books and thus preventing their deterioration. All the torn and old books which could not be used for circulation have been kept separately. There is a Library committee which helps in guiding the library for effective services. The institute has Professor In-Charge Library to take oversees the library activities and resources. The library committee meets at regular intervals for selection of books and other Library material. They also suggest ways and means to improve the services. The files relevant to Library and Library services are well maintained and labeled for easy access to any of the Library staff. All the newbooks and journals are kept in the new arrival racks for a period of two weeks or till the arrival of next lot of new books or journals. Because of the strict vigilance from library staff and the security personnel, the percentage of loss from the library is negligible.

### **Sports facility Maintenance**

The sports facilities of college are maintained by physical education department. A stock register and an issue register are maintained to ensure the proper handling of the sports items. Stock verification of the sports items is conducted at the beginning of each semester. Regular maintenance of the play area is conducted under the supervision of Sports' In-Charge and faculty sports coordinators.

#### **Computer Maintenance**

All necessary software are installed and maintained. Systems In-Charge is functioning in the campus for resolving the issues like hardware trouble shooting, software installation, Maintaining Biometric devices and network related issues are monitored and maintained. The complaints are addressed and resolved in due course of time. The Institute networking is also centrally monitored by the Systems person.

#### **Classroom Maintenance**

At the beginning of each semester the readiness of the classrooms are checked by the facility management team. Regular inspection, maintenance of the classroom furniture's is carried out.

File Description	Document	
Upload any additional information	<u>View Document</u>	
Paste link for additional information	<u>View Document</u>	

### **Criterion 5 - Student Support and Progression**

### **5.1 Student Support**

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during last five years

Response: 0

5.1.1.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
upload self attested letter with the list of students sanctioned scholarship	View Document
Upload any additional information Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years (Data Template)	View Document

5.1.2 Average percentage of students benefitted by scholarships, freeships etc. provided by the institution / non- government agencies during the last five years

Response: 1.26

5.1.2.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved

categories)

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	132

File Description	Document
Upload any additional information	View Document
Number of students benefited by scholarships and freeships institution / non- government agencies in last 5 years (Date Template)	View Document

# 5.1.3 Capacity building and skills enhancement initiatives taken by the institution include the following

- 1. Soft skills
- 2. Language and communication skills
- 3. Life skills (Yoga, physical fitness, health and hygiene)
- 4.ICT/computing skills

**Response:** C. 2 of the above

File Description	Document
Details of capability building and skills enhancement initiatives (Data Template)	View Document
Link to Institutional website	View Document

# 5.1.4 Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five years

**Response:** 16.13

# 5.1.4.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
138	411	389	158	493

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document

# 5.1.5 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

- 1. Implementation of guidelines of statutory/regulatory bodies
- 2. Organisation wide awareness and undertakings on policies with zero tolerance
- 3. Mechanisms for submission of online/offline students' grievances
- 4. Timely redressal of the grievances through appropriate committees

**Response:** B. 3 of the above

File Description	Document
Upload any additional information	<u>View Document</u>
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

### **5.2 Student Progression**

### 5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 23.37

### 5.2.1.1 Number of outgoing students placed year - wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
45	135	192	165	194

File Description	Document
Upload any additional information	View Document
Self attested list of students placed	View Document
Details of student placement during the last five years (Data Template)	View Document

### 5.2.2 Average percentage of students progressing to higher education during the last five years

Response: 8.61

#### 5.2.2.1 Number of outgoing student progression to higher education during last five years

Response: 57

Page 58/107 08-01-2022 10:12:29

File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education (Data Template)	View Document
Any additional information	View Document

5.2.3 Average percentage of students qualifying in state/national/international level examinations during the last five years (eg: IIT-JAM/CLAT/ NET/SLET/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations, etc.)

Response: 17.2

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: IIT/JAM/ NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations, *etc.*)) year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
2	2	3	4	3

5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government examinations) year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
8	16	22	22	18

File Description	Document
Number of students qualifying in state/ national/ international level examinations during the last five years (Data Template)	View Document

### 5.3 Student Participation and Activities

5.3.1 Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/national / international level (award for a team event should be counted as one) during the last five years.

**Response:** 0

# 5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) yearwise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at university/state/ national/international level during the last five year	View Document

### 5.3.2 Institution facilitates students' representation and engagement in various administrative, cocurricular and extracurricular activities following duly established processes and norms (student council, students representation on various bodies)

#### **Response:**

The college has a student council formed as per the guidelines given by SPPU University. Student's Council consists of student members besides faculty members. The council is chaired by the Principal of the Institute. The topper is a student having the highest marks/GPA in the recent examination in his class. The topper student is selected as a class representative (CR) of his class. All the CRs from the classes are members of the committee besides this the council has representation from the NSS unit. The council has one Sports secretary, one Cultural Secretary, and Ladies' representatives are nominated by the committee. One of the members of the council is selected as University Representative.

The objectives of constituting the student council are -

- To improve the academics, co-curricular, cultural, extracurricular activities and increase the participation
- To motivate the students for teamwork
- To get hold of leadership qualities
- To learn event managements
- To interaction with authorities, to resolve the difficulties of the students in routine activities.

The activities of the student council include the organization of Tech-feast in each academic year to motivate students to participate in technical and non-technical events. The students are participating in the organization of the annual social gathering, also they participate in the celebration of nationally important days like Independence day, Republic day, etc., to develop the feeling and sense of nationalism and also celebrate Teacher's day & Engineers Day. Council also organizes events like Ganesh Festival, Dahi Handi, Shiv Jayanti, various cultural days, and art gallery events.

The student's representatives serve in almost all academic and administrative bodies of the college such as departmental boards, departmental associations, and

various clubs, student's council, Anti Ragging Cell, Anti sexual harassment cell, SC/St Cell, Women's Grievance Cell, Training and Placement Cell, NSS, sports Committee, Library committee, Magazine committee, etc. The constitutions of all the Committees and councils are well defined and democratic procedures are followed in the constitution of the committees and councils.

The role and responsibilities of Student Representatives are to disseminate the information from the college administration to all students and organize co-curricular, extra-curricular, and social events, organize programs in NSS, and maintain a conducive and anti-ragging environment in the hostel and college premises.

A lot of student activities are carried out through various student clubs and associations under the guidance of the department faculty coordinators and office bearer students. All these activities- curricular, co-curricular, and extra-curricular help them to learn with fun in a conducive ambiance, exhibit their hidden potential, and develop technical as well as professional skills besides building confidence and sportive spirit.

The names of the departmental clubs in the institution are,

- Pinnacle club Computer Engineering students
- ACUMEN Club Information Technology students
- ASET (Association of Students of Electronics and Telecommunication)
- CESA (Civil Engineering Students Association)
- MESA (Mechanical Engineering Students Association)
- EESA (Electrical Engineering Students Association)

File Description	Document
Paste link for additional information	<u>View Document</u>

### 5.3.3 Average number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions)

**Response:** 1.6

### \_\_\_\_\_

# 5.3.3.1 Number of sports and cultural events/competitions in which students of the Institution participated year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
0	2	2	2	2

File Description	Document
Upload any additional information	<u>View Document</u>
Report of the event	View Document
Number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions (Data Template)	View Document

### 5.4 Alumni Engagement

# 5.4.1 There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

### **Response:**

Alumni play a very crucial role in college development by providing constructive feedback and creating awareness among the learners about technological advancements.

The Alumni Association of Matoshri College of Engineering& Research Centre is constituted with the purposes of promoting and assisting the alumni in carrying out its charter, serving as a vehicle for the institute to continue to enrich the lives of its alumni. In order to strengthen the symbiotic relationship and to execute positive service to Matoshri College of Engineering & Research Centre and society, the alumni association actively interacts as and when required.

The Alumni association contributes actively to the welfare of the institution. An institute-level alumni meeting is organized once a year by all the departments. Illustrious and prominent alumni are invited to deliver special lectures, motivating the students to go for higher education and to find the means for job opportunities. All the departments have one or two alumni as members of department boards. Their valid suggestions are taken into consideration in designing and updating the curriculum.

#### Overview

Following activities are carried to build a strong network with alumni.

- Interaction with students during course
- Mentoring Program
- Alumni Guest Lectures
- Alumni Judges for Activities
- Alumni Meet
- Alumni referrals for Campus Placement

#### Mission

The mission of the MCERC Alumni Association is to reach, engage and serve all alumni and present students by networking with one another to foster a life-long intellectual and emotional connection

Page 62/107 08-01-2022 10:12:31

between the college and its alumni.

### **Objectives**

This Alumni Association aims to provide a common platform for all Alumni of this institution and:

- To promote networking amongst MCERC. Alumni.
- To foster the overall development of students with the cooperation of alumni and college.
- To create awareness of technological development and new trends in research.
- To enable locating long-lost friends from college, to revive old memories and create some new ones.
- To build industry relations with the help of alumni to promote the placement of the students.
- To organize advanced courses, camps, educational visits, workshops, research guidance lectures, demonstration classes etc. for the students.
- To encourage the students for research projects and patent consultancy.
- To arrange and organize lectures, debates, discussions, seminars, and the like from time to time on diverse academic subjects for diffusion, acquisition, and development of knowledge of the students.
- Recognize the noteworthy achievements of the alumni.
- To provide guidance to industrial institutes in collaboration with alumni on employment and selfemployment for engineering students as well as for higher education of students.
- To make the alumni aware of the progress and expansion of the college.

File Description	Document
Paste link for additional information	View Document

5.4.2 Alumni contribution during the last five years (INR in lakhs)		
<b>Response:</b> E. <1 Lakhs		
File Description Document		
Upload any additional information	View Document	

### Criterion 6 - Governance, Leadership and Management

### 6.1 Institutional Vision and Leadership

### 6.1.1 The governance of the institution is reflective of and in tune with the vision and mission of the institution

### **Response:**

Governance in college functions through Governing Body (GB) and the College Development Committee (CDC) in which decisions, strategies, and regulations related to the development of the college is taken. The Governing Body approves the decisions taken by the College Development Committee and provides the necessary suggestions for the development and implementation. The Principal of the Institute presents the overall progress of the Institute in a view of the academic performance of the students, co-curricular and extracurricular activity conducted the overall development of the teacher in terms of qualification improvement, training, certifications, and research publications, and the infrastructural development of last academic year. And present the prospective plan of the institute in tune with the mission statements in a meeting of the College Development Committee. In addition, the financial budget is prepared and discussed in the meeting of the College Development Committee.

The College Development Committee discusses the progress and plan and takes the appropriate prepare the resolutions in a tune with the Vision and Mission of the institute. As per the suggestions of the College Development Committee and the governing body, the Principal prepares the comprehensive implementation plan for execution. The implementation plan includes infrastructure and facilities development, procuring learning resources, appointment and training of human resources, conduction of the academic activities, co-curricular and extracurricular activities, and training and placement of students.

File Description	Document
Upload any additional information	<u>View Document</u>
Paste link for additional information	View Document

# 6.1.2 The effective leadership is visible in various institutional practices such as decentralization and participative management

#### **Response:**

The Institute supports a practice of the decentralized governance system with proper well-defined interrelationships. At the top, there are two committees, Governing Body (GB) and the College Development Committee, formerly known as Local Management Committee (LMC). Executive decisions are taken at the meetings of these bodies mainly regarding Governance, Budgetary allocations, Resources allocation and Expansion. There are three levels of the administrative structure under which all the activities of the institute are carried out. These levels are Secretary, Principal and Department/Section Heads.

The college follows decentralization management through proper and well organized structure. Committees are framed at college for the implementation of all the decisions and resolutions. The

Page 64/107 08-01-2022 10:12:31

important decision making committees are Governing Body (GB) and College Development Committee (CDC). Special Committees have been constituted for the identified domains of functionalities. Members including teaching staff, nonteaching staff and/or students are included in these committees empowering their skills and leadership quality. Also students are involved actively to work independently through Students Council.

The college promotes participative management and encourages the staff and students for active involvement in administrative bodies like Grievance Redressal Cells, Anti Ragging Committee, Purchase Committee, Library Committee, Discipline Committee, Cultural Committee, and Student Council of the college.

The policies, standard operating procedures, guidelines, rules and regulations relevant to academic and administrative functions are well defined and unambiguous. The respective departments and committees are responsible for the execution of the tasks in their domain. For critical decisions, the Institute head guides the HoDs, Section Heads, and Committee heads. The various works include admission, AICTE and DTE work function (documentation), budget and procurement, training, placement, discipline, grievance, mentoring, purchase and library service, etc. All the Academic Departments, Sections, and Committees work autonomously in their work domain under the guidance of the Institute Head. The principal of the college is a member of GB. The decision and findings of GB are conveyed by the Principal to all the staff members. All staff members implement the policies and rules framed by management and work efficiently for improving the quality standard as a homogeneous team.

The institute always promotes the culture of participative management by involving staff and students in various activities. All decisions of the institution are governed by management. The students and faculty are allowed to express themselves for any suggestions to improve the excellence in any aspect of the Institute. The participatory management fairly conclusively adheres to the ethics of decentralization which is integral to the institution and informs its functioning transparently at every level of governance.

File Description	Document
Upload any additional information	View Document

### 6.2 Strategy Development and Deployment

#### 6.2.1 The institutional Strategic / Perspective plan is effectively deployed

#### **Response:**

The institute has implemented the plans strategically since its establishment. Progressively, the infrastructure has been expanded, the academic expansion has been done, extension services have been run, the resources have been procured, and practices have been standardized, human resources have been recruited, trained, and nurtured targeting the Vision of the Institute. With the learner-centric approach, Institute has concurred a few milestones in the course of 13 years. One of the activities successfully implemented based on the strategic plan is 'The Academic' which includes qualification and competence improvement of the faculty and enhancement in teaching-learning environment that in turn enriches the learners. The details of this practice are elaborated as below.

Thirst for excellence, is the motto of the faculty of Institute. In year 2016, institute has taken an initiative in establishing NPTEL Local Chapter with the objective to promote the teachers and students to learn various courses in greater depth from the experts form elite institutes and complete the certification courses. Similarly, since year 2019-20, students and teachers are learning from COURSERA too. Almost all teachers and many students have successfully completed various courses and certifications. The Institute has been recognized by NPTEL with Grade A for three consecutive years.

In the unprecedented and challenging period of pandemics, the Institute head has come up with the idea of creating video resources to the learners with the active involvement of the faculty. Separate web space has been reserved for the repository of video lectures and indigenously portal has been designed and maintained for the effective execution of course contents.

All the Teachers at department since last two years have begun recording the lectures, and made them available online for students and these videos are being used as supportive educational tools. Teachers are educated to concentrate on following key points -Technical Contents, Organization of Contents and lecture script, Presentation, Narration and Animations, Tools for recording, Active Learning and Students Engagement. The effect has been observed progressively in the preparation, presentation, and execution.

### **Highlights:**

- 1)Institute has its own portal is https://learning.matoshri.edu.in/as digital repository and for access to these video lectures.
- 2)Through an online portal, video lectures and supporting learning material is made available for the students.
- 3)Video lectures are prepared as per University prescribed curriculum for all the theory and laboratory courses. Besides, that few topics beyond curriculum are covered.
- 4)Each course video lecture series is outlined with clear objectives, outcomes, and plans.
- 5)It serves as any time anywhere learning aid and own motivation for students to learn the course without any constraints fostering the habit of self-study.
- 6)The videos and related material are reviewed by competent experts and Feedback is collected from students and senior teachers online. Based on suggestions and recommendations of experts and feedback, corrective measures are taken to improve the quality of video lectures and learning material.

It is observed that students appreciate the availability of recorded lectures, which leads to higher course satisfaction.

These learning resources are available for scholars for extension and enhancements.

File Description	Document
strategic Plan and deployment documents on the website	View Document
Paste link for additional information	View Document

### 6.2.2 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment, service rules and procedures, etc.

### **Response:**

Institute is governed by a decentralized system controlled by the strong nucleus. The proper functional delegation exists in the Institute. The Institute follows the hierarchy in the workflow and the roles are unambiguously defined. The delegation works transparently with efficacy so as to provide proper dynamics and adaptability for executing the tasks within the scope. Governing Body (GB) and College Development Committee (CDC) are the executive components in the hierarchy, responsible and accountable for the overall result of the execution.

### **Governing Body (GB)**

The governing body has been constituted as per the guidelines of statutory bodies. The Governing Body is responsible for formulating the policies of the institution, providing the right direction for all-around development of the institute, and ensures the proper governance periodically. It chalks out a roadmap in order to achieve the goals of the Institution from time to time.

#### **College Development Committee (CDC)**

The College Development Committee has been constituted for the overall functioning, monitoring the processes & progress, and recommending the necessary guidelines for the overall development of the institute. The College Development Committee is formed as per section 97 of the Maharashtra Public Universities Act, 2016.

#### **Administrative Set-Up:**

The Secretary and the Principal form the nucleus of the administration with the former being the final authority in all financial matters.

#### Service rules and procedures:

Employee Service rules and procedures are guided by the SPPU Pune University First Statutes (latest edition), the Constitution of the college and the rules of the State Government as amended from time to time in this regard. The recruitment rules for the teaching staff are as prescribed by the UGC and the Eligibility as per AICTE. The promotional policies for the employees are according to the affiliated University, Savitribai Phule Pune University.

#### **Grievance Redressal Mechanisms:**

There are several Grievance Redressal Mechanisms including the Anti-Sexual Harassment Cell with its Redressal Committee, the Anti-Ragging Cell, a Grievance Redressal Cell with complaint boxes prominently placed, and the full implementation of the Right to Information. The grievances regarding the Internal and External examinations are also resolved by the Examination Committee.

Institute maintains service books of the employees.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	<u>View Document</u>
Link to Organogram of the Institution webpage	View Document

#### 6.2.3 Implementation of e-governance in areas of operation

- 1. Administration
- 2. Finance and Accounts
- 3. Student Admission and Support
- 4. Examination

**Response:** B. 3 of the above

File Description	Document
Screen shots of user interfaces	View Document
ERP (Enterprise Resource Planning) Document	View Document
Details of implementation of e-governance in areas of operation, Administration etc	View Document
Any additional information	View Document

### **6.3 Faculty Empowerment Strategies**

### 6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

#### **Response:**

Human resource is the backbone of the Institute. Satisfied and motivated staff can transform the organization to a higher level of achievement. This is rightly understood by the Principal and the higher management of the society. The practices and attitude towards the employee are always considerate and encouraging for the service. Employee welfare schemes and practices are responsible for high retention of the human resource on the premises.

First of all, the institute has group insurance for the employees, which is renewed every year. The majority

Page 68/107 08-01-2022 10:12:33

of the staff members participate in the group insurance scheme and are insured as per their premiums. Recently the family members of the deceased staff have been benefitted from the insured lump sum amount. Institute has Employee's Provident Fund (EPF) for the select staff and the Employer's contribution is regularly deposited without fail. Earn leave and Medical leave facilities are available to the eligible staff. Maternity leave and maternity concessions are also available to the employees.

Financial assistance and on-duty leaves are sanctioned to faculty who attend conferences, workshops, and Faculty Development Programs. Faculty are promoted for qualification improvement and study leaves are also granted as and when required.

There is a Credit Society run by the Institute, which gives the facility to the staff for loans with competent interest rate. The procedure to sanction the loan is quick and easy. There is the flexibility provided for the duration of repayment. The dividend is credited to all shareholders of the Credit Society every year.

College provides No Objection Certificate, Salary Certificates, and Needed documents to the employees as and when required. On the request of an experience certificate, Institute readily provides the certificate to the requester. For the official work, if the personal vehicle is used by the staff member then the fuel reimbursement is done as per the usage. If the staff member visits the other City for the official work, then conveyance with Dearness Allowance is paid.

College pays utmost care to provide safe RO processed water to the employees. A huge and safe parking shed is available to the staff to park their vehicles. Adequate security guards are available for safety and security and the whole college building is under CCTV surveillance.

Institute also provides festival advance against the salary for Diwali. Uniform cloth is provided to the employees at a reasonable rate from the stores. Long lives are given to the employees in critical requirements. Ambulance and medical care are also available in the premises.

File Description	Document	
Upload any additional information	View Document	
Paste link for additional information	View Document	

# 6.3.2 Average percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

#### **Response:** 0

### 6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Upload any additional information	<u>View Document</u>
Details of teachers provided with financial support to attend conference, workshops etc during the last five years	View Document

## 6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

#### **Response:** 3

# 6.3.3.1 Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
4	4	2	3	2

File Description	Document
Upload any additional information	View Document
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff	View Document

# 6.3.4 Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP)during the last five years (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course).

**Response:** 26.3

# 6.3.4.1 Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
35	39	33	39	26

File Description	Document
Upload any additional information	View Document
IQAC report summary	View Document
Details of teachers attending professional development programmes during the last five years	View Document

### 6.3.5 Institutions Performance Appraisal System for teaching and non-teaching staff

#### **Response:**

Performance appraisal for teaching and non-teaching staff is taken once a year in a structured format to evaluate the progress and performance of staff. Teaching staff performance is evaluated on the basis of academic as well as contribution in co-curricular activities. The principal evaluates the self-assessment forms, analyzes the student feedback from students, and takes a review of the appraisal.

Self-appraisal is done on the basis of four parameters are Teaching, Learning and Evaluation Related Activities; Co-curricular, Extension and Professional Development; Research and Academic Contribution; and Others.

Teaching-learning and evaluation related activities include Teaching-learning activities, Performance in attendance of students, Performance in results, Additional lectures and academic duties like remedial coaching, career counseling, competitive exam preparation, general counseling, soft skill development of the student, extra teaching load, additional post-graduate, teaching, add on courses, Preparation of study material and resources and Innovative teaching-learning methods.

Co-curricular, extension and professional development related activities include Student related co-curricular, extension and field-based activities like NSS program officer, student welfare officer, workshop conduction, cultural activities (departmental/institutional), lectures on special topics, quiz / debate/elocution, study tour, essay competition/other competition, exhibition, day celebrations, alumni association, sports activities, counseling, anti-ragging committee, sexual anti-harassment committee/grievance committee, budget, sports activity, Contribution to college and community work, Administrative and academic work or activities and Professional development activities such as participation in seminar/symposia / conference, convener/organizing committee member, secretary/chairman/ member of a professional body, resource person.

Research, publications, and academic contribution includes Published paper in journal (journal & conference proceedings), Faculty development Programme/Workshop/seminar/soft skill courses attended, Ongoing and completed research projects and consultancies, and Research guidance /qualification

Others include Industrial visits of students, Industrial training by staff, Library usage, and Expert lectures organized.

After this, it conducts the personal interview and evaluates the staff on the ground of Technical Knowledge, Communication Skills, and English Proficiency, commitment to work, and Conduct / Behavior. After a progression period of one year, a review of the improvement of staff was evaluated and

further necessary action is taken.

The appraisal of non-teaching staff members is done after the screening of self-appraisal form which includes Job responsibility, Courses, and Training Programme Attended, Performance in technical work, Administration related activities, Co-curricular work, and Development related activities. Other parameters for evaluation are Commitment to Organization, discipline, Drive for self-motivation, Behaviour/Attitude related to staff and students, attitude toward work, Team Player, Punctuality, Adaptability, Participation in inter and intra department activity, and Technical Knowledge. The necessary recommendation is given by the concerned Head of the departments and the Principal in the self-appraisal form.

The evaluated self-appraisal form of all staff is submitted through HoD/Section Head to the principal. The Principal meticulously reviews the performance of the Faculty/Staff and gives approval for increments. The principal takes the appropriate action for the improvement of the performance of the faculty.

File Description	Document	
Upload any additional information	<u>View Document</u>	
Paste link for additional information	View Document	

### 6.4 Financial Management and Resource Mobilization

#### 6.4.1 Institution conducts internal and external financial audits regularly

#### **Response:**

Proper Budgetary Planning, Budgetary Provision, Budgetary Utilization, and Financial audit are the pillars on which the economy of the Institute rests. Monitoring, accounting, and auditing play the role in assessing the Cash/Fund flows and resource-wise reports to be generated when and as required. The College has a mechanism for internal and external financial audits.

#### **Internal Audit:**

The college has a separate Internal Audit that monitors the utilization of finances. The frequency of internal audits is Half-yearly. The internal audit is done by the Society Office. Society has appointed an Internal auditor. The regular checks are made with regard to all payments including disbursement of scholarship, salaries paid, expenses of consumables and purchase of equipment, etc.

Auditor's report is presented to the Principal and Secretary of Matoshri Education Society.

#### **External Audit:**

The external audit is carried out by a Registered Chartered Accountant appointed by Society who performs an audit of the financial statements of the college. The grants received by the college are also audited by Registered Chartered Accountant for their utilization.

The financial records of the College are audited every year after the end of March. The audited statement of accounts is submitted to the society office.

After completion of the audit process, external auditors give the balance sheet, income and expenditure statement, fixed schedule assets statement, and audit report.

No objection has been made by the auditing firm to date.

The college accounts are audited regularly by both Internal and External auditors. Hence there have been no major findings/objections. Minor errors or omissions and additions when pointed out by the audit team are immediately corrected/rectified and precautionary steps are taken to avoid recurrence of such errors in the future.

File Description	Document
Upload any additional information	<u>View Document</u>
Paste link for additional information	View Document

# 6.4.2 Funds / Grants received from non-government bodies, individuals, philanthropers during the last five years (not covered in Criterion III)

#### **Response:** 0

6.4.2.1 Total Grants received from non-government bodies, individuals, Philanthropers year wise during the last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Details of Funds / Grants received from of the non-government bodies, individuals, Philanthropers during the last five years	View Document

#### 6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

#### **Response:**

The college has a well-defined procedure to monitor effective and efficient utilization of available resources for infrastructure development, teaching-learning process, and overall development.

The college is self-financed. The financial resources are generated through tuition fees, scholarships from Government, exam remuneration (College share), interest on Fixed Deposit receipts and grants received from University for the NSS unit, Student development, Earn and Learn, Equipment, Parking Shed, Skill development, Research seminar.

Before the financial year begins, all the departments are required to submit their budget proposals. The Heads of the departments and section heads finalize their projected budget and submit it to the Principal. The departmental budgets are then discussed and approved by the Principal, further put into the institutional budget, and then forwarded for approval to the Society office.

College budget includes expenses such as salary, apparatus, equipment, consumables, semi-consumables, furniture and library (e.g. books, journals and periodicals), electricity, internet charges, facilities maintenance cost, stationery, bus charges for industrial visit, and other development expenses.

Grants incurred through different funding agencies are utilized appropriately as per the defined heads with prior approval from the Principal. All income and expenditures of the institute are effectively monitored by the management in coordination with the Principal and account officer of the college. All the payments are made through the college account after due processing and approval by the accounts department.

Purchase is done through a well-defined process in which the requirement of items such as equipment/computers for labs and books etc. are given by concerned persons such a faculty, lab-assistant, librarian, storekeeper, etc. The institute has prepared its own manual and who's who in the process involved. After the approval of the Principal and account officer in college, the requirement proceeds to the Society. After the approval of Principal and Society Purchase orders are placed through the central purchase department to the vendors. The payments are released after delivery of the respective Material or Services. It is done as per the terms and conditions mentioned in the purchase order. The entire process of the procurement of the material is monitored by the HOD and Principal at the college level, then the Accounts & finance department at the Society level.

All accounts are maintained on the computer using Tally software and Student Fees & Salary record are maintained. Principals, HoDs, and Section heads have a certain financial authority to spend the funds at their level to expedite the process of procurement at their level. It results in minimizing the procrastination in procurement in case of urgency.

File Description	Document
Upload any additional information	<u>View Document</u>
Paste link for additional information	View Document

# 6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

**Response:** 

The IQAC has consistently striven to institutionalize quality assurance strategies and processes at every level of the institution's functioning. From devising strategies to improve the teaching-learning process through increased use of ICT, expanding the scope of the library, transforming it into a multivalent knowledge portal, and signing MoUs with research institutes to re-defining the boundaries of a vitalizing, meaningful, and holistic education the IQAC has been a proactive player in the overall benchmarking process.

The IQAC has regularly convened meetings; it has submitted the AQARs to NAAC in a timely manner; it has collected feedback inappropriate forms from different stakeholder categories, analyzed the same, and used it for qualitative improvement. Institute departments have conducted Academic and Administrative Audits and have initiated follow-up actions as per the suggestions and recommendations of the eminent evaluators.

Two practices institutionalized as a result of IQAC initiatives are:

1. Academic and administrative Audit: IQAC conducts an internal academic audit twice a semester and takes appropriate remedial actions to improve the quality of technical education. The basic aim is to determine the existence, operation, and effectiveness of the quality system. The continuous improvement is achieved through periodic audits and satisfying statutory requirements. Academic audits help the college to know their strength and challenges and IQAC to assess the quality status individually and institution as a whole. It also helps in identifying the best practices that can be evolved and institutionalized.

During the audit, course files are thoroughly verified.

Besides planning, monitoring, and assessing the content delivery the other additional duties ensured are:

- Time table and workload verification are done at the beginning of every semester.
- Monitoring of classes and reporting the discrepancies (if any) to the higher authorities
- Laboratory audit
- Library audit
- Identified slow/advanced learners and organized activities to address their needs.
- Identified curricular gaps and organized guest lecture/seminar/workshop/ certificate courses on different topics to fill the curricular gap

#### 1. Student Feedback Survey:

As Faculty plays a major role in providing quality technical education, reviews of the quality of the faculty members are done twice, once at the mid of the semester and the other at the end of the semester to improve the teaching-learning process. Student Feedback Survey of Each and Every Faculty member who handled classes/practicals in a semester is taken periodically. A standard questionnaire- simple and straightforward, is used with key factors on which the faculty member's performance is assessed. These is the online and offline surveys for each class of students and the students have to assess the individual faculty member. Based on all the feedbacks, IQAC provides constructive comments to improve the quality of teaching and the teaching-learning process, if required.

File Description	Document
Upload any additional information	<u>View Document</u>
Paste link for additional information	View Document

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities ( For first cycle - Incremental improvements made for the preceding five years with regard to quality For second and subsequent cycles - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives )

## **Response:**

The Academic Audit System helps to attain the mission and to march towards the vision. To ensure the directed and significant progress the internal academic audit through IQAC and external academic audit by the external experts are done twice a year, generally at the end of the first semester and at the end of the second semester. The audit system undertakes continuous monitoring and evaluation of the departmental academic processes and practices. Every department has a well-structured system of internal and external review named as Department Academic Audits System (DAAS). This audit system is instrumental in quality assurance and continuous improvement.

## **Internal Academic Audit System:**

Every academic year the members of the Internal Academic Audit Committee are nominated by IQAC. Generally, the members of the Internal Academic Audit Committee are the Academic coordinator of the respective department and two academic coordinators of the other departments. The main objective of the Internal Academic Audit Committee is to verify the academic activities of the departments as per the defined standards and the processes and prepare the detail report.

The Internal Academic Audit report is submitted to IQAC. Based on the submitted report IQAC prepares the suggestions. This audit report and the suggestions of IQAC are made available to the External Academic Audit Committee.

## **External Academic Audit Committee:**

The members of the External Academic Audit Committee are appointed by the head of the Institute as per the recommended names from the department. This committee is constituted of three or four members, minimum of one member from the Industry and others from academia.

#### Mechanism of external audit:

In the beginning, the members of the External Academic Audit committee are acquainted with the practices, processes, academic calendar, and activity calendar by the head of the department. Then the committee members interact with the head of the department with respect to previous academic audit reports, their compliances, current internal academic audit report, and observations & suggestions of IQAC. The committee members then thoroughly interact with the individual course instructors. The

Page 76/107 08-01-2022 10:12:36

individual course instructor provides all the relevant documents and presents the contributions and initiatives taken by them. During the interactions, the members record the facts and observations.

Considering the interaction with individual faculty, audit head, relevant documents, defined criteria, and overall ambiance the audit report is prepared. The audit report includes strengths, weaknesses, general observations, suggestions, and recommendations. The audit report is presented by the committee in staff meetings and submitted to the head of the department.

As per the observations, suggestions, and recommendations of the committee every head of the department prepares the plan of implementation to overcome the lacunas if any, and suggestions for quality assurance. It is discussed in the DAB meeting and submitted to IQAC for information.

#### **Effect of Academic Audit:**

- Strengthened the standardized processes and practices
- Increased the competence of the faculty and learners
- Enhanced the involvement of the faculty with students
- Enhanced academic contribution of the faculty
- Contributed towards the continuous improvement and quality assurance

File Description	Document
Upload any additional information	<u>View Document</u>
Paste link for additional information	View Document

#### 6.5.3 Quality assurance initiatives of the institution include:

- 1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements
- 2. Collaborative quality intitiatives with other institution(s)
- 3. Participation in NIRF
- 4.any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

#### **Response:** D. 1 of the above

File Description	Document
Upload details of Quality assurance initiatives of the institution	View Document
Upload any additional information	View Document
Paste web link of Annual reports of Institution	View Document

# **Criterion 7 - Institutional Values and Best Practices**

# 7.1 Institutional Values and Social Responsibilities

# 7.1.1 Measures initiated by the Institution for the promotion of gender equity during the last five years.

## **Response:**

In this era of modernization any discrimination on the basis of gender is going to lead the detrimental social consequences. In the teaching institute such type of discrimination may lead to irreparable social effects. So our Institute takes care in educating the learners in this regard and arranges various events for the awareness. Our college arranges workshops, annual functions and youth festivals on the theme of gender equality and women empowerment encouraging the students to express their support for gender equality. Student's exposure has been expanded with the visits at the village, district and city level to accrue their knowledge on gender issues which may bring a change in attitudes and behaviors of people.

Though social activities don't have any direct relation with academics but these activities impact the overall learning of the students. Therefore Matoshri College of Engineering and Research Centre conduct various programs in campus so that students will know their social responsibilities. One such programme was gender equity and lecture was delivered by Prof. Jayshri Khare on women's day.

The concept of gender equity refers to "fairness of treatment for both females and males, according to their respective needs. This may include equal treatment that is different but which is considered equivalent in terms of privileges, rights, benefits, obligations and opportunities" (International Labour Office [ILO], 2000).

Education is a prerequisite for promoting gender equity for men and women in economic empowerment. So, we arrange such programs and activities to encourage men and women to get involve equally as well as to focus on promoting the uniform participation of females and males in making decisions; reducing enrolment gap between them. We focus on good quality education to benefit all students fairly, and support targeted action for girls' and women's empowerment.

Gender equity means that the different behavior, aspirations, and needs of females and males are considered, valued, and favored equally. Each mentor advices and solves students problems equally. The ultimate goal is to create a culture where all voices are heard and all perspectives are considered without judgment.

Gender sensitization is imperative for creating a new reformed society where women are accorded equal rights and status with men in every sphere of life, women's contribution to socio-economic development is given due recognition and their achievements are celebrated, thereby we took some activities to making them confident and bold enough to recognize their own strengths and capabilities. Men will also shed off their egos and act actively towards dismantling systems of inequality.

Education is a human right and is imperative for achieving the goals of equality, development and peace. We establish women grievance cell to look after the effective implementation of policies and programmes for disadvantaged groups and to provide guidance and counselling in academic, financial, social and other matters. And we organize programmes to sensitize college on problems faced by the reserved categories in

Page 79/107 08-01-2022 10:12:37

Higher Education.

File Description	Document
Link for annual gender sensitization action plan	View Document
Link for specific facilities provided for women in terms of: a. Safety and security b. Counselling c. Common Rooms d. Day care center for young children e. Any other relevant information	View Document

# 7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

- 1. Solar energy
- 2. Biogas plant
- 3. Wheeling to the Grid
- 4. Sensor-based energy conservation
- **5.**Use of LED bulbs/ power efficient equipment

**Response:** B. 3 of the above

File Description	Document
Geotagged Photographs	<u>View Document</u>
Any other relevant information	View Document
Any other relevant information	View Document

# 7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

- Solid waste management
- Liquid waste management
- Biomedical waste management
- E-waste management
- Waste recycling system
- Hazardous chemicals and radioactive waste management

#### **Response:**

#### **Solid Waste Management:**

Our Institution has taken many initiatives towards waste management. The Institute follows the principle of 3R (Reduce, Reuse and Recycle) to meet its objective of Sustainable Development.

The institution's key operations have less impact on the environment as the college is very conscious of generating negligible waste. Waste characterization is the first critical step in successful waste management. In our institute, we have a simple solid waste management system. It involves everything from collection to disposal. Paper and paper products, pens, disposable drink containers, waste food in canteen and compostable organic material etc are the waste products in college campus. Adequate number of trash cans and dust bins are placed all over the campus. We separately collect these wastes at different locations in bins according to the properties like disposable and non disposable waste material as well as solid and liquid waste. The vegetable waste from the canteen are arranged to be disposed regularly to keep the campus clean.

## **E-waste management:**

E-waste management is one of the challenges faced by the organizations in the modern era. Typically Electronic and electrical wastes are generated every now and then. The institute takes efforts to minimize e-waste by repairing the computer peripheral and electronic components. UPS Batteries are recharged / repaired / exchanged by the suppliers. The institute also takes benefit of the various buy back offers from the suppliers. Any damages or reductions in capacity are set right by repairs. In addition, the college has emphasis on minimum paper usage to save carbon emission in printers. Despite of the reuse the material has been scrapped as and when required. The institute does not generate the hazardous waste, radioactive waste and biomedical waste.

## **Liquid Waste management:**

In our institute care is taken to mange liquid waste by reducing the generation of liquid waste where ever possible. The generated liquid waste mainly comprises of food wastes, dairy products and waste water. In adhering to the first goal on the reduction of water usage, various sensitization programmes are conducted for students on the conservation and use of water. The remaining liquid waste is collected through plumbing system and discharged properly.

Along with this, storm water is collected from terrace and ground floor areas through various pipes and is utilized properly for watering of lawns. The water thrown out of the RO purification system is used for watering the plants and trees in the campus. For the appropriate use of the water and chemicals in the labs and canteen the displays portraying the optimum use and minimum wastage are emblazoned.

File Description	Document
Link for Geotagged photographs of the facilities	View Document
Link for Relevant documents like agreements/MoUs with Government and other approved agencies	View Document

#### 7.1.4 Water conservation facilities available in the Institution:

- 1. Rain water harvesting
- 2. Borewell /Open well recharge
- 3. Construction of tanks and bunds
- 4. Waste water recycling
- 5. Maintenance of water bodies and distribution system in the campus

**Response:** C. 2 of the above

File Description	Document
Geotagged photographs / videos of the facilities	<u>View Document</u>
Link for any other relevant information	View Document

## 7.1.5 Green campus initiatives include:

- 1. Restricted entry of automobiles
- 2. Use of Bicycles/ Battery powered vehicles
- 3. Pedestrian Friendly pathways
- 4.Ban on use of Plastic
- **5.landscaping with trees and plants**

**Response:** C. 2 of the above

File Description	Document
Various policy documents / decisions circulated for implementation	View Document
Geotagged photos / videos of the facilities	<u>View Document</u>
Link for any other relevant information	View Document

# 7.1.6 Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:

- 1. Green audit
- 2. Energy audit
- 3. Environment audit
- 4. Clean and green campus recognitions / awards
- 5. Beyond the campus environmental promotion activities

Response: C. 2 of the above

File Description	Document	
Reports on environment and energy audits submitted by the auditing agency	View Document	
Certification by the auditing agency	View Document	
Link for any other relevant information	View Document	

## 7.1.7 The Institution has disabled-friendly, barrier free environment

- 1. Built environment with ramps/lifts for easy access to classrooms.
- 2. Divyangjan friendly washrooms
- 3. Signage including tactile path, lights, display boards and signposts
- 4. Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment
- 5. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading

**Response:** C. 2 of the above

File Description	Document
Policy documents and information brochures on the support to be provided	View Document
Geotagged photographs / videos of the facilities	View Document
Link for any other relevant information	View Document

# 7.1.8 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 500 words).

#### **Response:**

Matoshri College of engineering Education and Research Centre, through its practices and endeavors, is successful in creating a homogeneous group of individuals belonging to different religions, castes and creeds. Matoshri Institute of Engineering and Research Centre has always been at the pole position for sensitizing the students about cultural, regional, linguistic communal and socioeconomic diversities of the state and the nation. Institute has undertaken various initiatives in the form of celebration of days of eminent personalities, National Festivals, NSS and other such activities to provide for an inclusive environment by bringing students and teachers with diverse background on single platform for creating all inclusive environments. Two important national festivals, Republic Day and Independent Day are celebrated every year in Institute campus. All teaching, non-teaching staff and students participate for the cause of nation. The inspiring speeches are delivered on these occasions followed by cultural programme.

The Institute always encourages the students to organize and participate in different programs organized by Institute, inter-Institute, university and other Government or non-government organization to

Page 83/107 08-01-2022 10:12:39

make them sensitize towards cultural, regional, linguistic, communal and socio economic diversities. To represent our Indian culture, on the eve of our Institute annual gathering, Institute organizes a traditional dress competition and fashion show. In this competition students wore the different outfits representing the different states, religions and cultures. Through this activity students get acquainted with the different cultural aspects of our nation and help to develop the tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities. This also creates the inclusive environment in the Institute and society.

File Description	Document
Link for any other relevant information	View Document
Link for supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View Document

# 7.1.9 Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).

## **Response:**

Constitution of India is a unique legendary document by itself, helping the governance to rule without any prejudice & malice and easing the lives of citizens. The citizen belong to different backgrounds viz., cultural, social, economic, linguistic, and ethnic diversities governed and guided by the Constitution irrespective of caste, creed and religion.

To equip students with the knowledge, skill, and values those are necessary for sustaining one's balance between a livelihood and life by providing an effective, supportive, safe, accessible, and affordable learning environment. These elements are included in the value system of the college community. The students are inspired by participating in various programs on culture, traditions, values, duties, and responsibilities by inviting prominent speakers. The institute has conducted awareness programs on the 'ban on plastics', 'cleanliness', 'Swachh Bharat', etc. involving students.

Our institution takes all possible initiatives in organizing various events and programmes for moulding the students and staff to become responsible citizens of the country by sensitizing them to the constitution of the country. As responsible citizens of the country the students are motivated to take part in various activities of the college. The college encourages the students to take part in blood donation camps, study tours for them helping them understand the importance of protecting the cultural heritage of the country. The special lectures also focus on enlightening the students about their rights and duties being the responsible citizens of the country. Singing of national anthem in the campus every day, so as to bring a feeling of patriotism among all, is practiced. The students also being the responsible citizens take many community services and provide services to mankind and society.

The students have taken up many cleanliness drives both inside the campus and nearby villages considering it as a responsibility of every citizen. The students have also taken up Plantation drives to provide a clean and green environment for all. Swachh Bharat Abhiyan has also been an important

initiative taken up by the college where we have organized an awareness rally for the students and took a tour in entire town to create awareness among all.

Every year Republic Day is celebrated on 26th Jan by organizing activities highlighting the importance of Indian Constitution. Independence Day is also celebrated each year to highlight the struggle of freedom and the importance of Indian constitution.

A separate NSS unit works to encourage the students and the unit is successfully conducting activities to serve the society.

Guest lectures and workshops are arranged by eminent personalities to deliver lectures on ethics, values, duties, and responsibilities and on saving the environment. Ethical Values, rights, duties, and responsibilities of citizens are some of the topics those are included in Elocution, debates, and class presentations.

File Description	Document
Link for details of activities that inculcate values necessary to render students in to responsible citizens	View Document
Link for any other relevant information	View Document

# 7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.

- 1. The Code of Conduct is displayed on the website
- 2. There is a committee to monitor adherence to the Code of Conduct
- 3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff
- 4. Annual awareness programmes on Code of Conduct are organized

**Response:** C. 2 of the above

File Description	Document
Details of the monitoring committee composition and minutes of the committee meeting number of programmes organized reports on the various programs etc in support of the claims	View Document
Code of ethics policy document	View Document
Any other relevant information	View Document

# 7.1.11 Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).

#### **Response:**

Matoshri College of Engineering, Eklahare is committed to promote ethics and values amongst students and faculty. The college believes in celebrating events and festivals in college. It is an integral part of learning and building a strong cultural belief among students. The College makes efforts in celebrating the national and international days, events and festivals throughout the year.

Emphasising the importance of sustainable development and taking care of environment college conducted 'Tree Plantation' to celebrate the World environment day on 5th June.

Yoga is an invaluable gift of India's ancient tradition. It embodies unity of mind and body; thought and action; restraint and fulfillment; harmony between man and nature; holistic approach to health and wellbeing. It is not about exercise but to discover the sense of oneness with yourself, the world and the nature. By changing our lifestyle and creating consciousness, it can help in well-being. So we work towards adopting an International Yoga day on 21st June". College invites Yoga Expert to guide the importance of 'Yoga' to students and staff on same day.

India's Independence Day is significant as it stands as a reminder of the sacrifices that many freedom fighters made to get Independence from British rule. We celebrate this commemorative day on 15th August.

Dr. Sarvepalli Radhakrishnan said, "Instead of celebrating my birthday, it would be my proud privilege if 5thSept is observed as Teachers Day", hence we celebrate this commemorative day as 'Teachers Day'. Teachers with performance and seniority are felicitated on this occasion.

The great Engineer of our country Sir M. Visvesvaraya, who created many engineering marvels therefore, for the huge contribution he made to the nation's assets and growth. To pay tribute to him we celebrate his birthday on 15thSeptember as Engineers Day. Our college celebrates this day enthusiastically. Teachers with performance and contribution as an engineer are felicitated on this occasion.

As the first Home Minister and Deputy Prime Minister of India, Sardar Vallbhabhai Patel organized relief efforts for refugees freeing to Punjab and Delhi from Pakistan and worked to restore peace. He led the task of forging a united India, successfully integrating into the newly independent nation. We celebrate this day as National Unity Day on 31st October.

Constitution Day also known as National Law Day is celebrated in India on 26 November every year to commemorate the adoption of the Constitution of India. We celebrate this commemorative day enthusiastically.

File Description	Document
Link for Geotagged photographs of some of the events	View Document
Link for Annual report of the celebrations and commemorative events for the last five years	View Document

#### 7.2 Best Practices

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

## **Response:**

Title of the Best Practice 1: Organizing Training and Industry tours

## **Objectives of the Practice:**

- To expose students to the industrial environment
- To become familiar to be working in team for the completion of the given task
- To understand and sharpen technical skills required for employability
- To enhance the report writing and presentation skills
- To interact with experts in solving the queries
- To understand the social, economic and administrative considerations that influence the working environment of industrial organizations

#### The Context

Majority of the Engineering graduates prefer to work in an industry after their graduation. There is need to arrange the industrial visits and summer/winter training during their education so that they understand the trends and technologies used in industry, professional ethics, and industrial work culture. Every department has departmental training and placement student coordinator, who with the help of senior students, alumni, teachers and parents working in industries prepares the plan and coordinates the activities.

#### The Practice

Institute arranges the industrial visits and summer/winter training for students during their education. The students are encouraged to undergo industrial trainings during their semester break in third year and fourth year of program. Faculty members give their guidelines, suggestions, scope and schedule of the training program. They also help the students to interact with the industrial experts, provide the students recommendation letters and other necessary supports. The coordinator constantly interacts with alumni those who are working in the industries and request them to provide necessary suggestions and supports for their juniors.

#### **Evidence of Success**

·Skill and Knowledge:Training programs help to improve the knowledge and skills of students understanding the technical advancements, platforms and modern tools used in the industry. Students also learn work ethics, human relations and safety through training.

- Confidence: Students get involved in the training program and feel free to communicate which ultimately boosts their confidence and reduce their inhibitions.
- Bonding: This involvement of the students leads to a closer bonding between the employers and the

Page 87/107 08-01-2022 10:12:40

student.

- Communication Skills: Communication skills and report writing skills get enhanced
- **Knowledge and Skills:** Students learn about the Application of domain knowledge, industrial environment and to perceive the future trends and technologies

# **Problems Encountered and Resources Required**

- As most of the students are from rural background, they lack in English communication, presentation skills and expressions. Their confidence level is comparatively lower. It takes lot of efforts and counseling sessions are needed to make them participative.
- Students are reluctant to participate in paid training sessions due to their economic constraints. Hence, institute bears some part of fees to have maximum enrollment for trainings.
- Student's mentoring is necessary while selecting industrial tours and training. Coordinator constantly interacts with alumni those who are working in the industries and request them to provide necessary guidelines and supports to their juniors.
- Necessary Transportation facilities and document support is provided for the visits
- A full time TPO, department coordinator and supporting staff are the key resources required.

# Title of the Best Practice 2: Students' empowerment through internship

## **Objectives of the Practice:**

- To acquaint with the technological advancements and modern tools used in the industry
- To lead and work as a team member to complete given tasks following the deadlines
- To understand and sharpen the technical skills helping in employability
- To interact with experts help to solve queries with practical exposure
- To understand the social, economic and administrative considerations that influence the working environment of industrial organizations

#### The Context

An internship is a professional learning experience that offers meaningful, practical work related to a student's field of study or career interest. An internship gives a student the opportunity for career exploration and development, and to learn new skills. It offers the employer the opportunity to bring new ideas and energy into the workplace, develop talent and potentially build a pipeline for future full-time employees. The purpose of an internship is to provide real-world experience that enable students to put everything they have learned into action so that they understand the trends and technologies used in industry, professional ethics, and industrial work culture and establishes bonding with industry.

#### The Practice

The students are encouraged to take up internship programs during their semester break in third and fourth year of program. Faculty members give their guidelines, suggestions and scope and contact details of an internship. They also help the students to interact with the industrial experts, provide the students recommendation letters and other necessary supports. The coordinator constantly interacts with alumni those who are working in the industries and request them to provide necessary guidelines and supports for

their junior's internship. Along with internship department also provides in-house training/ hands on practice / workshops from the industry experts to the students.

#### **Evidence of Success**

- The student exhibits improved performance in academic theory and laboratory courses
- The students are inculcated with the streamlined ideas on problem identification and proper team formation for the project work.
- Learner's Analyses abilities, designing and modeling capabilities and implementation/execution with all inclusive considerations have been improved.
- Students become dexterous in working within a team and as an individual.
- Internships have helped the student's to master professional soft skills such as communication, punctuality and time management.
- Report writing skills and presentation skills of the learners has improved.
- Having successfully completed an internship has made the learner more employable.
- An internship has helped a student to choose an appropriate career as per his/her personality, lifestyle, passions and goals.

# **Problems Encountered and Resources Required**

- As most of the students are from rural background, they lack in English communication, presentation skills and expressions. Their confidence level is comparatively lower. It takes lot of deal and need counseling sessions to make them participative.
- Student's mentoring is necessary while selecting Internships. Coordinator constantly interacts with alumni those who are working in the industries and request them to provide necessary suggestions and supports to their juniors.
- A full time TPO, department coordinator and supporting staff are the key resources required.
- Efficient and effective Communication and necessary means, proper documentation, correspondence and follow up are necessary.

File Description	Document	
Link for Best practices in the Institutional web site	View Document	

#### 7.3 Institutional Distinctiveness

# 7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

#### **Response:**

## E-Contents development as an augmentation to Teaching-Learning

In year 2016, institute took an initiative in establishing NPTEL Local chapter with objective to promote students and teachers to register, learn in greater depth and complete the certification courses. Similarly

Page 89/107 08-01-2022 10:12:40

since year 2019-20, students and teachers are learning from COURSERA too. Almost all teachers and many students have successfully completed various courses. The Institute has been recognized with Grade A since last three years consecutively by NPTEL. It is noticed that video lectures are important part of core information delivery mechanism. From feedback of students and teachers it has been revealed that recorded video lecture can be a very effective educational tool and has significant impact in changing the learning environment. Institute has taken initiative in training and promoting teachers for creating the video lecture series as per the university prescribed curriculum for all the engineering and core science courses progressively. Teachers at department since last two years have begun recording the lectures, and made them available online for students and these videos are being used as supportive educational tool. Teachers are guided and trained so as to build effective videos.

Teachers are educated to concentrate on following key points:

- Technical Contents
- Organization of Contents and lecture script
- Presentation, Narration and Animations
- Tools for recording
- Content Delivery
- Active Learning and Students Engagement

# **Highlights:**

Institute has its own portal is https://learning.matoshri.edu.in/ (https://learning.matoshri.edu.in/) as digital repository and for access of these video lectures. Link is available at home page of institute website https://engg.matoshri.edu.in/ (https://engg.matoshri.edu.in/) Through an online portal, video lectures and supporting learning material is made available for the students. Video lectures are prepared as per university prescribed curriculum for all the theory and laboratory courses. Besides that few topics beyond curriculum are covered. Each course video lecture series is outlined with clear objectives, outcomes and plan.

At present the video lectures available at portal include:

• Number of Courses: 156

• Total number of video lectures: 2411

• Average duration of one video lecture: 35 min

• Overall feedback: Excellent

• Total size: 400 GB

• Number of users: a. Teachers: 148 and b. Students: 1878

• Total Visitors to Portal: 17051

Every course's video lecture series includes pre-recorded lectures, resource materials, lecture notes, assignments. Some of the courses have self-assessment tools like case studies, quizzes, puzzles, tests and simulations.

It serves as any time anywhere learning aid and own motivation for students to learn the course without any constraints fostering the habit of self-study. The videos and related material are reviewed by the competent experts and Feedback is collected from students and senior teachers online. Based on suggestions and recommendations of experts and feedback, corrective measures are taken to improve the

quality of video lectures and learning material.

It is observed that students appreciate the availability of recorded lectures, which leads to higher course satisfaction. These learning resources are available for the scholars for extension and enhancements.

# **Outcomes and Impact:**

- Anytime anywhere learning
- Learning at an individual pace
- Opportunity for self-study and self-testing
- Improved learning with different topic difficulty
- Learning without any obligation
- Opportunity for multidisciplinary learning
- Higher count of elaborations, practice of solving numerical and problems with varying complexities
- Easier way for revision and better understanding through practice questions and assignments
- Overall more effective learning
- Improvement in quality of the teaching

# Other innovative pedagogical practices followed by teachers for improving learning include:

- Blogs
- What's app groups
- Case Studies, exemplars and analogies
- Brain Storming Sessions
- Collaborative learning
- Use of online coding and compilation tools
- Google Classroom
- Quizzes, Puzzles ...

#### **Scope for Self learning:**

During the engineering education students learn mostly the fundamental and core subjects. In this era of cut throat competition and looking at the rate of change of technologies the learners should keepthemselves on the toes to learn themselves. The applied knowledge related to the concepts they have learnt cannot be gained without referring the relevant material / literature. Most of the curriculums of engineering courses are designed with certain prerequisite knowledge. Even though this prerequisite knowledge may be acquired by the learner in learning the prerequisite courses but there is a scope forcomprehension by learning themselves. In a curriculum of some of the courses the scope for self-learning are explicitly mentioned. During the seminar and project work the learners have to experience theself-learning to some extent. Scope for self-learning helps students to inculcate and develop problem solving ability, learning by observation and discussion, developing life-long learning skills by providing the most modern facilities, environment and support. Students are given regular communication related to the availability of any additional learning opportunities provided by state/ Central government, premier institutions like IITs, IIMSetc., which would help them to explore their field of interest. For self-learning or learning beyond syllabus during the semesters institute shares material and organize different types of activities like workshop, training, conferences, club activities, and quizzes. For these activities academic calendar has sufficient provisions and HOD is authorized to change in schedule with permission of respective authorities if necessary.

## The facilities to encourage self-learning are:

- Online videos prepared by institute faculty for each course available on web portal
- Library facility available beyond working hours.
- Recorded video lectures of institute, IITs and NPTEL videos are available in institute as well as in department library to view or collect.
- Opportunity to do mini projects during the course has been encouraged.
- Learning and implementing concepts beyond the syllabus based on students interest has been greatly encouraged.
- Adapting the students to the industrial needs via in-plant training.
- Computer facility with internet made available even beyond the working hours.
- Institute has NPTEL student chapter
- Institutes had registration on "Coursera" online international training portal.
- All major Newspaper of different languages
- E-notes/ notes for all subjects of all Departments
- Additional E books for the courses through Digital Library.

Our endeavor of E-Content development has proven as need of the time in the unprecedented scenario of Pandemic.

File Description	Document
Link for appropriate web in the Institutional website	View Document
Link for any other relevant information	View Document

# 5. CONCLUSION

# **Additional Information:**

In a very short span of 13 years, the institute has expanded and progressed significantly at all fronts. The notable highlights are-

- From an intake of 180 for three programs at UG, the institute has grown to an intake of 654 at seven UG and five PG programs.
- The institute has three research centers for Ph.D.
- Within mere six years after establishment, three UG programs have been permanently affiliated and at present, six UG programs are permanently affiliated in total.
- The institute has acquired 2(f) and 12(b) recognition from the UGC.
- The institute has successfully completed the first cycle of NAAC in the year 2014.
- To certify the standards and processes of professional institutes, we have applied for NBA accreditation.

# **Concluding Remarks:**

To epitomize, we strive hard in all-round development of the institute in terms of infrastructure, academic, and human resources to obtain the accreditations to certify the standards and processes followed, and understand the scope for the improvement to achieve the defined Vision through the autonomy status.

Page 93/107

# 6.ANNEXURE

#### 1.Metrics Level Deviations

Metric ID | Sub Questions and Answers before and after DVV Verification

- 1.1.3 Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and/are represented on the following academic bodies during the last five years
  - 1. Academic council/BoS of Affiliating university
  - 2. Setting of question papers for UG/PG programs
  - 3. Design and Development of Curriculum for Add on/ certificate/ Diploma Courses
  - 4. Assessment /evaluation process of the affiliating University

Answer before DVV Verification: A. All of the above Answer After DVV Verification: B. Any 3 of the above

Remark: Observation Accepted

1.2.2 Number of Add on /Certificate programs offered during the last five years

1.2.2.1. How many Add on /Certificate programs are offered within the last 5 years.

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
46	40	37	25	16

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
17	18	18	10	6

Remark: Observation Accepted

- 1.2.3 Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years
  - 1.2.3.1. Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2012	1864	1916	2020	1407

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
998	835	721	763	637

	erage percen rk/internship	_		_	riential lea	rning t	hrough	project	work/fiel
	1.3.2.1. <b>Numl</b> <b>rk/internship</b> Answer be		during last	five years	iential lear	ning th	rough	project v	vork/field
	2020-21	2019-20	2018-19	2017-18	2016-17				
	27	39	44	37	36				
	Answer At	fter DVV V	erification :						
	2020-21	2019-20	2018-19	2017-18	2016-17				
	12	12	12	12	12				
cor	npleted acade  1.3.3.1. Numl  Answer be	ber of stude	Verification	: 689				s (Data f ernships	or the lat
Av D.S	npleted acade  1.3.3.1. Numl  Answer be	ber of stude fore DVV Veter DVV Veter DVV Veter DVV Veter Acceptation Acceptage of full turing the leter of full t	Verification erification: 6 ecepted time teachers tive years ime teachers.	: 689 653 ers with Phars (considers with <i>Ph</i> .	ect work/fi  D. / D.M.  or only high	eld wor	rk / into	ernships .B Super	rspecialit
Av D.S	1.3.3.1. Numl Answer be Answer aft Remark : Obs erage percent Sc. / D.Litt. d 2.4.2.1. Numl Sc. / D.Litt. you Answer be	ber of stude fore DVV Veter DVV Veter DVV Veter Acceptance of full during the leter of full the fore DVV Veter of the DVV Vet	Verification erification: 6 excepted extime teachers ast five year ime teachers aring the last Verification	: 689 653 ers with Phars (considers with Ph. st five years	ect work/fi  D. / D.M.  only high  D. / D.M. /	eld wor	rk / into	ernships  B Super	rspecialit
Av D.S	1.3.3.1. Numl Answer be Answer aft Remark : Obs erage percent Sc. / D.Litt. d 2.4.2.1. Numl Sc. / D.Litt. ye Answer be	ber of stude fore DVV Verer DVV Verer DVV Verer DVV Verer Student State of full the	verification erification: 6 excepted time teachers the last five years werification 2018-19	: 689 653 ers with Phars (considers with Phars is five years): 2017-18	D. / D.M. / S. 2016-17	eld wor	rk / into	ernships  B Super	rspecialit
Av D.S	1.3.3.1. Numl Answer be Answer aft Remark : Obs erage percent Sc. / D.Litt. d 2.4.2.1. Numl Sc. / D.Litt. you Answer be	ber of stude fore DVV Veter DVV Veter DVV Veter Acceptance of full during the leter of full the fore DVV Veter of the DVV Vet	Verification erification: 6 excepted extime teachers ast five year ime teachers aring the last Verification	: 689 653 ers with Phars (considers with Ph. st five years	ect work/fi  D. / D.M.  only high  D. / D.M. /	eld wor	rk / into	ernships  B Super	rspecialit
Av D.S	1.3.3.1. Numl Answer be Answer aft Remark : Obs erage percent Sc. / D.Litt. d 2.4.2.1. Numl Sc. / D.Litt. yo Answer be 2020-21	ber of stude fore DVV Verer DVV Verer DVV Verer DVV Verer Student State of full the	verification erification: 6 excepted excepted exterior the last five year the last verification 2018-19	: 689 653 ers with Phars (considers with Ph. st five years: 2017-18	D. / D.M. / S. 2016-17	eld wor	rk / into	ernships  B Super	rspecialit
Av D.S	1.3.3.1. Numl Answer be Answer aft Remark : Obs erage percent Sc. / D.Litt. d 2.4.2.1. Numl Sc. / D.Litt. yo Answer be 2020-21	ber of stude fore DVV Verer DVV Verer DVV Verer DVV Verer Stude tage of full luring the lear of full the tear wise during the lear wise during the 12019-20	verification erification: 6 excepted excepted exterior the last five year the last verification 2018-19	: 689 653 ers with Phars (considers with Ph. st five years: 2017-18	D. / D.M. / S. 2016-17	eld wor	rk / into	ernships  B Super	rspecialit
Av D.S	1.3.3.1. Numl Answer be Answer aft Remark : Obs erage percent Sc. / D.Litt. d 2.4.2.1. Numl Sc. / D.Litt. yo Answer be 2020-21 15	ber of stude fore DVV Verer DVV Vere	verification erification: 6 excepted  time teachers that five year the last verification 2018-19  10  erification:	: 689 653 ers with Phars (considers with Ph. st five years: 2017-18	ect work/fi  D. / D.M. er only high  D. / D.M. / s  2016-17	eld wor	rk / into	ernships  B Super	rspecialit

#### completed academic year in number of years)

## 2.4.3.1. Total experience of full-time teachers

Answer before DVV Verification: 823 Answer after DVV Verification: 796

3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years

3.3.1.1. How many Ph.Ds registered per eligible teacher within last five years

Answer before DVV Verification: 9 3.3.1.2. **Number of teachers recognized as guides** 

during the last five years

Answer before DVV Verification: 7
Answer after DVV Verification: 3

Number of research papers per teachers in the Journals notified on UGC website during the last five years

3.3.2.1. Number of research papers in the Journals notified on UGC website during the last five years.

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
90	46	65	68	84

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
3	2	4	4	6

Remark: Observation Accepted

- Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years
  - 3.3.3.1. Total number of books and chapters in edited volumes/books published and papers in national/international conference proceedings year-wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
19	78	22	68	38

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2	1	0	2	0

- 3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years
  - 3.4.3.1. Number of extension and outreached Programmes conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
14	13	11	16	12

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
6	10	7	12	8

Remark: Observation Accepted

- Average percentage of students participating in extension activities at 3.4.3. above during last five years
  - 3.4.4.1. Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
305	211	410	1888	528

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
183	92	232	1024	415

Remark: Observation Accepted

- 3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/internship per year
  - 3.5.1.1. Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year-wise during the last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
8	25	39	36	32

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
3	3	3	3	3

Remark: Observation Accepted

- Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the last five years
  - 3.5.2.1. Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
7	6	4	2	6

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
4	2	2	2	3

Remark: Observation Accepted

- 4.1.3 Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc. (Data for the latest completed academic year)
  - 4.1.3.1. Number of classrooms and seminar halls with ICT facilities

Answer before DVV Verification: 33 Answer after DVV Verification: 21

Remark: Observation Accepted

- 4.1.4 Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years(INR in Lakhs)
  - 4.1.4.1. Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
57.53	57.53	32.63	91.47	96.08

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
78.5	50.84	26.7	90.17	94.23

Remark: Observation Accepted

- 4.2.3 Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)
  - 4.2.3.1. Annual expenditure of purchase of books/e-books and subscription to journals/e-journals year wise during last five years (INR in Lakhs)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2.37	5.87	2.36	1.75	1.34

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
1.93	4.78	0.07	0.18	0.85

Remark: Observation Accepted

- 4.4.1 Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years(INR in Lakhs)
  - 4.4.1.1. Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year-wise during the last five years (INR in lakhs)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
25.88	25.88	12.65	22.31	14.24

Answer After DVV Verification:

I ms wer i meer B v v vermeumon .					
2020-21	2019-20	2018-19	2017-18	2016-17	
11.37	25.89	12.65	22.31	14.24	

Remark: Edited as per document provided

- 5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during last five years
  - 5.1.1.1. Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
1732	1594	1607	1715	1679

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

Remark: Observation Accepted

- Average percentage of students benefitted by scholarships, freeships etc. provided by the institution / non- government agencies during the last five years
  - 5.1.2.1. Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
400	0	0	0	276

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	132

Remark: Observation Accepted

- 5.1.3 Capacity building and skills enhancement initiatives taken by the institution include the following
  - 1. Soft skills
  - 2. Language and communication skills
  - 3. Life skills (Yoga, physical fitness, health and hygiene)
  - 4. ICT/computing skills

Answer before DVV Verification : A. All of the above Answer After DVV Verification: C. 2 of the above

- Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five years
  - 5.1.4.1. Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

#### Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
448	704	659	397	1224

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
138	411	389	158	493

Remark: Observation Accepted

- 5.1.5 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases
  - 1. Implementation of guidelines of statutory/regulatory bodies
  - 2. Organisation wide awareness and undertakings on policies with zero tolerance
  - 3. Mechanisms for submission of online/offline students' grievances
  - 4. Timely redressal of the grievances through appropriate committees

Answer before DVV Verification: A. All of the above Answer After DVV Verification: B. 3 of the above

Remark: Observation Accepted

5.2.1 Average percentage of placement of outgoing students during the last five years

5.2.1.1. Number of outgoing students placed year - wise during the last five years.

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
121	252	201	172	213

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
45	135	192	165	194

- Average percentage of students qualifying in state/national/international level examinations during the last five years (eg: IIT-JAM/CLAT/ NET/SLET/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations, etc.)
  - 5.2.3.1. Number of students qualifying in state/ national/ international level examinations (eg: IIT/JAM/ NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State

# government examinations, etc.)) year-wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2	4	7	7	5

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2	2	3	4	3

# 5.2.3.2. Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government examinations) year-wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
8	16	22	22	18

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
8	16	22	22	18

Remark: Edited excluding other exam.

# Average number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions)

# 5.3.3.1. Number of sports and cultural events/competitions in which students of the Institution participated year-wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0	13	12	13	12

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0	2	2	2	2

## 5.4.2 Alumni contribution during the last five years (INR in lakhs)

Answer before DVV Verification : A. ? 5 Lakhs Answer After DVV Verification: E. <1 Lakhs

# 6.2.3 Implementation of e-governance in areas of operation

- 1. Administration
- 2. Finance and Accounts
- 3. Student Admission and Support
- 4. Examination

Answer before DVV Verification : A. All of the above Answer After DVV Verification: B. 3 of the above

Remark: Observation Accepted

6.3.2 Average percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

6.3.2.1. Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
05	20	54	65	65

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

Remark: Observation Accepted

- 6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years
  - 6.3.3.1. Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff year-wise during the last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
6	5	5	6	5

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
4	4	2	3	2

6.3.4 Average percentage of teachers undergoing online/ face-to-face Faculty Development

Programmes (FDP)during the last five years (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course).

# 6.3.4.1. Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course year-wise during the last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
173	177	144	160	82

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
35	39	33	39	26

Remark: Observation Accepted

# 7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

- 1. Solar energy
- 2. Biogas plant
- 3. Wheeling to the Grid
- 4. Sensor-based energy conservation
- 5. Use of LED bulbs/ power efficient equipment

Answer before DVV Verification: A. 4 or All of the above

Answer After DVV Verification: B. 3 of the above

Remark: Observation Accepted

#### 7.1.4 Water conservation facilities available in the Institution:

- 1. Rain water harvesting
- 2. Borewell /Open well recharge
- 3. Construction of tanks and bunds
- 4. Waste water recycling
- 5. Maintenance of water bodies and distribution system in the campus

Answer before DVV Verification: A. Any 4 or all of the above

Answer After DVV Verification: C. 2 of the above

Remark: Observation Accepted

# 7.1.5 Green campus initiatives include:

- 1. Restricted entry of automobiles
- 2. Use of Bicycles/ Battery powered vehicles

- 3. Pedestrian Friendly pathways
- 4. Ban on use of Plastic
- 5. landscaping with trees and plants

Answer before DVV Verification: A. Any 4 or All of the above

Answer After DVV Verification: C. 2 of the above

Remark: Observation Accepted

- Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:
  - 1. Green audit
  - 2. Energy audit
  - 3. Environment audit
  - 4. Clean and green campus recognitions / awards
  - 5. Beyond the campus environmental promotion activities

Answer before DVV Verification: B. 3 of the above Answer After DVV Verification: C. 2 of the above

Remark: Observation Accepted

- 7.1.7 The Institution has disabled-friendly, barrier free environment
  - 1. Built environment with ramps/lifts for easy access to classrooms.
  - 2. Divyangjan friendly washrooms
  - 3. Signage including tactile path, lights, display boards and signposts
  - 4. Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment
  - 5. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading

Answer before DVV Verification: A. Any 4 or all of the above

Answer After DVV Verification: C. 2 of the above

Remark: Observation Accepted

- 7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.
  - 1. The Code of Conduct is displayed on the website
  - 2. There is a committee to monitor adherence to the Code of Conduct
  - 3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff
  - 4. Annual awareness programmes on Code of Conduct are organized

Answer before DVV Verification: B. 3 of the above Answer After DVV Verification: C. 2 of the above

Extended (	Questions							
Number of courses offered by the Institution across all programs during the last five years								
Answer before DVV Verification:								
2020-21	2019-20	2018-19	2017-18	2016-17				
333	329	330	326	326				
	32)		320	320				
Answer Af	Answer After DVV Verification:							
2020-21	2019-20	2018-19	2017-18	2016-17				
519	512	512	512	512				
Number o	Number of students year-wise during last five years							
Answer be	fore DVV V	erification:						
2020-21	2019-20	2018-19	2017-18	2016-17				
2012	1864	1916	2020	2104				
		12720						
Answer Af	ter DVV Ve	rification:						
2020-21	2019-20	2018-19	2017-18	2016-17				
1956	1864	1916	2020	2103				
	- 4							
Number o	f seats earm	arked for r	eserved cate	egory as pe				
last live ye	tal S							
Answer be	fore DVV V	erification:						
2020-21	2019-20	2018-19	2017-18	2016-17				
327	327	327	327	327				
			327	327				
Answer Af	ter DVV Ve	rification:						
Answer Af 2020-21	2019-20	rification:	2017-18	2016-17				
Answer Af	ter DVV Ve	rification:						
Answer Af 2020-21 255	2019-20 255	2018-19 255	2017-18 255	2016-17 255				
Answer Af 2020-21 255	2019-20	2018-19 255	2017-18 255	2016-17 255				
Answer Af 2020-21 255  Number o	2019-20 255	2018-19 255 final year s	2017-18 255	2016-17 255				
Answer Af 2020-21 255  Number o	2019-20 255 f outgoing /	2018-19 255 final year s	2017-18 255	2016-17 255				
Answer Af 2020-21 255  Number o Answer be	iter DVV Ve 2019-20 255 f outgoing /	rification: 2018-19 255  final year s erification:	2017-18 255 tudents yea	2016-17 255 r-wise dur				
Answer Af 2020-21 255  Number o  Answer be 2020-21	2019-20 255 f outgoing / fore DVV V 2019-20	rification: 2018-19 255  final year s erification: 2018-19	2017-18 255 tudents yea 2017-18	2016-17 255 <b>r-wise dur</b> 2016-17				
Answer Af 2020-21 255  Number o  Answer be 2020-21 659	2019-20 255 f outgoing / fore DVV V 2019-20	rification: 2018-19 255  final year s erification: 2018-19 617	2017-18 255 tudents yea 2017-18	2016-17 255 <b>r-wise dur</b> 2016-17				

	662	647	617	517	742			
			l					
1	Number of full time teachers year-wise during the last five years							
	Answer before DVV Verification:							
	2020-21	2019-20	2018-19	2017-18	2016-17			
	129	132	138	171	170			
	Answer At	fter DVV Ve	erification:					
	2020-21	2019-20	2018-19	2017-18	2016-17			
	113	116	119	168	163			
					1			
.2	Number o	f sanctioned	i posts year	-wise during	g last five yo			
	Answer be	fore DVV V	erification:					
	2020-21	2019-20	2018-19	2017-18	2016-17			
	129	132	135	175	169			
	Answer After DVV Verification:							
	2020-21	2019-20	2018-19	2017-18	2016-17			
	129	132	135	178	169			
.1				seminar hal	ls			
	Answer before DVV Verification: 46 Answer after DVV Verification: 42							
2	<b>Total Exp</b>	enditure ex	cluding sala	ry year-wis	e during las			
	Answer before DVV Verification:							
	2020-21	2019-20	2018-19	2017-18	2016-17			
	701.03	701.03	617.90	644.36	706.89			
		fter DVV Ve						
	2020-21	2019-20	2018-19	2017-18	2016-17			
	2020 21							